The Journal of the American Medical Association

VOL. XXXIV CHICAGO, ILLINOIS, MAY 19, 1900. No. 20.

Original Articles.

THE PRESENT STATUS OF OPERATIONS FOR CANCEROUS UTERI.*

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We are one and all curious creatures of habit and victims of fancy. For example, if a little epidemic of smallpox claims a dozen victims or so, everybody is horror-sticken and large numbers of people are vaccinated as a precautionary measure. This is because smallpox is associated with a horrible disfiguring eruption. Thousands of victims die year by year of typhoid fever, in many of our large cities—notably in Philadelphia, through a long series of years—at a time in the world's history when it has long been shown that about one in a hundred thousand is what may be considered an average death-rate in well-regulated communities, and the most public interest that can be aroused is an occasional little spasmodic flutter in the newspapers. And this goes on indefinitely when every child knows that pure water will stop the disease, and when the pure water is within reach. The same is true of the awful scourge, tuberculosis, when we know that clean streets and good sanitation, all within easy reach of communities already spending sums vastly in excess of those abroad of equal size, will largely tend to check the disease. Let us not blame the politicians, degraded as most of them are, but let us blame the low moral standard of the whole body politic of which we are a component part and in which we ourselves bear our due share of the odium. The same is true of that terrible scourge, cancer. What systematic, thorough-going, persistent efforts are we making to get at the root of the matter, to make a notable reduction in the number of its victims? Are we not all of us simply treating the few cases that come into our hands without reference to the enormous crop which goes on increasing year by year.

Welch has collected statistics which show the frightful prevalence of cancer in civilized countries. He gives these data:

PRIMARY CANCERS.	STOMACH.	UTERUS.
11,131 in Vienna	10 per cent.	31 per cent.
7,150 in New York	25.7 per cent.	24.2 per cent.
9,118 in Paris (Tanchou)	25.2 per cent.	32.8 per cent.
1,378 in Paris (Salle)	31.9 per cent.	32 per cent.
587 in Berlin	35.8 per cent.	25 per cent.
183 in Wurzburg	34.9 per cent.	19 per cent.
1,046 in Prague	37.6 per cent.	33.3 per cent.
889 in Geneva	45 per cent.	15.6 per cent.
31,482 Total	21.4 per cent.	29.5 per cent.

Commenting on this large group of cases he says: "From this table it appears that in some collections of cases the uterus is the most frequent seat of primary cancer, while in other collections the stomach takes the first rank. If the sum total of all the cases be taken, the conclusion would be that about one-fifth of primary cancers are seated in the stomach and somewhat less than one-third in the uterus. Even if allowance be made for the apparently too low percentage of cases of gastric cancer in the large Vienna statistics, I should still be inclined to place the uterus first in the list of organs most frequently affected with primary cancer and to estimate the frequency of gastric cancer compared with that of primary cancer elsewhere as not over 25 per cent."

Who that has never been affected by the disease can even begin to estimate the awful sum total of misery suffered by one patient as the disease progresses to its dreadful end.

It would, therefore, seem not unfitting that we should gather from time to time: 1. To discuss our individual results in the treatment of cancer. 2. To criticise each other and to inquire as to the best methods of treatment. 3. To forecast as nearly as may be the best lines of investigation for the immediate future.

In the first place I will lay down the dictum long since accepted but still needing reiteration in our country, that *in every case of cancerous uterus the entire organ must be removed.*

All well know that an epithelioma of the cervix tends in its upward progress to respect in a remarkable way the line of demarcation between the cervix and the body of the uterus, and that an adenocarcinoma of the body in like manner shows a remarkable tendency to limitation at the internal os uteri. There is, therefore, a temptation, particularly in the early stages of these diseases, to do a lesser operation, amputating the cervix, or removing the body.

Let me emphatically declare again that all such partial operations are wholly unjustifiable, as, speaking on the basis of 176 cases of my own, studied most minutely, I find that the exceptions are so numerous that they must for practical purposes be reckoned as the rule. In one instance, many years ago, I left in the vaginal end of the cervix, in a case of carcinoma of the body, and several years later the poor woman returned with the cervix thoroughly diseased and an extensive involvement of the rectum as well. In other cases of cancer of the cervix I have found the disease repeatedly in the body and in one it missed the body but was in the tubes!

The great opprobrium of all our operations lies in the fact that we often leave some of the disease behind. It is essential, therefore, to an intelligent discussion as to the best methods of attacking the disease, that we shall agree as to the methods by which it extends into the neighboring tissues. We have just seen that the entire uterus must be regarded as suspected and therefore removed. With the uterus *we must remove the uterine tubes in all cases of cancer of the body.*

The next great danger area is the vaginal vault. Cer-

* Read before the New York County Medical Association, April 16, 1900.

vical cancer in many instances extends down the vagina in an invisible form under the mucosa, without at first causing any perceptible infiltration or blush of color to excite suspicion. Every operator has seen, at one time or another, a distressingly early recurrence in the scar at the vaginal vault, due to the rapid growth of foci which ought to have been exterminated at the radical operation. It is therefore a necessary precaution *to give the disease a wide berth on the vaginal side, cutting at least 2 or 2.5 cm. away from it.*

Anteriorly the disease often involves the base of the bladder before it has extended far in any other direction; here *good surgery will readily sacrifice and repair the entire affected vesical area, leaving it sticking to the cervix uteri.*

The posterior extension of the cancer, in the earlier operable stages of the disease, is fortunately rare, as it is peculiarly difficult to meet this complication with anything like a real radical operation.

Almost all cases of involvement of the bowel are also associated with an extensive lateral involvement.

The lateral extensions of cancer of the cervix to the right and to the left, out through the bases of the broad ligaments, surrounding the ureters, reaching to the pelvic walls, involving the pelvic and the iliac glands, are by far the most important because the most frequent and the most difficult to meet therapeutically.

I think we have all agreed so far, and my dicta will have aroused no opposition, but here we meet our first crux, here opinions are widely divergent. What is the mode of this lateral extension? Is it *per continuitatem,* or is it *per saltum?* Is there a direct steady progression of the disease from the cervix out into the neighboring and from there into the contiguous tissues? Or should we expect to find beyond the manifest disease, a zone of sound tissue, and then isolated foci of disease in the tissues or in the glands? It is at once manifest that according as we hold one or the other of these opposing views, our surgical procedures will vary widely. For the sake of comparison let me cite the operations for cancer of the breast. Under the old idea that the disease was localized in the breast the surgical measures were limited to its amputation. Now the knowledge that the disease jumps from the breast into the axilla and from the axilla into the neck has completely transformed the surgery of this region.

Attracted by an apparent analogy between cancer of the breast and cancer of the uterus, and believing that the frequent recurrences were due in large measure to glandular metastases, there was worked out in my clinic several years ago, by Dr. S. G. Clark, a most ingenious operation, in which the uterine artery was tied back at its origin and the tissues between this and the cervix, together with the glands, were all removed, in addition to dissecting out and removing pelvic and iliac glands. This operation was radical to an extent that no operation had ever been before, and for a time we hoped for great things from the change in our methods, but the close sifting of my material, which immediately followed this change, together with the careful microscopic study of all the glands removed, showed that there was but one case—an adenocarcinoma of the cervix—in which there was an early glandular involvement, while in numerous others, in which I had removed enlarged glands and in which I felt sure from the gross appearance that I was removing cancerous foci, the microscopic study showed nothing but an infiltration with mononuclear and polymorphonuclear leucocytes. Winter has found but two cases of glandular involvement in 44 operable cases examined.

Allow me therefore to state, further, these two dicta:

Cancer of the cervix usually extends by direct involvement of the contiguous tissue. Extension by glandular metastases per saltum is unusual in the earlier operable stages of the disease.

If these statistics are borne out by further investigations, then practical deductions of enormous import flow directly as corollaries from these dicta. The operator must concentrate his whole efforts in giving the diseased cervix the widest possible berth, and if he enucleates well out in sound tissues he need not concern himself about the tissues beyond.

One more consideration of the utmost importance, which is bound to have great weight in determining the best mode of operating: What is the danger of implanting cancerous germs and starting fresh foci in the sound tissues in the course of an operation in which the uterus with all the diseased tissues has been enucleated? Experiments from the time of von Langenbeck have shown that it is possible to inoculate cancer either by injecting bits of cancerous tissue into the circulation, when the particles form cancerous emboli which may continue to grow, or by implanting them under the skin, or in the peritoneal cavity. These implantations are much more apt to flourish if they are taken from an animal of the same species and if the transfer is carried out aseptically.

The clinical evidence of the implantation of carcinoma in women is abundant in all cases of peritoneal cancer where the rapid dissemination of the growth is manifestly due to the lodgment of small particles here and there and their continued growth in the new region.

In one of my cases of (Gyn. 3323) extensive ovarian papillomata, seen in February, 1895, there was an extension of the papillary disease from the peritoneal surface out through the abdominal wall to within 2 mm. of the skin surface, through the track of an old trocar puncture. The papillary growth in this unusual situation preserved its ordinary characteristics and many of the little cavities containing the dendroid masses were also filled with desquamated epithelium and polymorphonuclear leucocytes.

A case which I believe was without doubt one of autoimplantation from adenocarcinoma of the body of the uterus into the vagina was that of a patient seen in November, 1895, and illustrated (Nos. 174 and 175) in the first volume of my book (pp. 256, 257). The vaginal affection retained all the characteristics of the uterine growth, which, however, was not suspected to exist at the time the isolated patches of the vaginal disease were removed.

Positive evidence that the cancerous particles can be sown into the abraded epithelial surfaces or into the cellular tissues in the course of an operation for cancer is not abundant, but such evidence as there is is significant; for example: in 1891 Schoff reported a case in which, owing to the narrowness of the vagina, he was obliged to make incisions on each side in order to get at the diseased uterus. Three months later cancerous nodules were found in the scars in both sides of the vagina, without any evidence of a return of the growth in the pelvis above.

Hofmeier had a similar case in 1895, and in less than a year an ulcerated nodule was found below in the left vaginal scar, with no return of the vault. Both the original disease and the implantation were adenocarcinomata. Leopold noted the implantation of a squamous-

celled carcinoma on an abrasion produced by the leg holder, observed at the operation. The nodule appeared within a year and was as large as a walnut.

It is a little difficult to estimate the practical value of such observations and to decide how far they are entitled to influence our technique. The implantations in the vagina below the field of operation are, everyone will acknowledge, rare accidents. The question may be fairly raised whether there is even a small liability of a successful inoculation of the disease in the loose parametric cellular tissue when drainage is used and the wound heals slowly by granulation.

Having in this way cleared the field for the discussion, I will give in the briefest possible manner the practical results of my own work, and a résumé and a critique of various methods of operating.

First and foremost is it not worth while to operate at all on a cancerous uterus? Do not all patients thus affected sooner or later die of a return of the disease? There is a widespread conviction through the entire medical profession, a conviction which, if I mistake not, has found utterance even here in New York through prominent specialists, that the radical operation is really of no lasting benefit, and is one of those things specialists do because they are specialists, but which they would really better leave undone.

The periods of time in which these patients have remained well are as follows:

ADENOCARCINOMA OF THE BODY.

Gyn. No.	Gyn. Path. No.	Time since operation. Years.	Months.
2436	100	6	0
2817	321	5	6
2832	345	5	6
2934	392	5	4
Sanitarium.	944	4	0
4262	1133 and 1137	3	8
Dr. Eccles.	1154 and 1192	3	8
Sanitarium.	1349	3	7
Sanitarium.	1350	3	5
4745	1358	3	0
4746	1359	3	2
Sanitarium.	1412 and 1414	2	9
4922	1473	1	11
5876	2161 and 2183	1	10
5958	2238	1	9
6008	2279 and 2283	1	8
6535	2291 and 2750	1	1
6581	2797	0	11
6659	2897	0	11

If we take it for granted that the two patients where the subsequent history could not be obtained, are dead, we still have 19 out of the 30, or *63 per cent., showing no evidence of a return of the growth at the present time.*

Of the patients with adenocarcinoma of the cervix who are well at the present time, one was operated on five years and seven months, the other five years and three months ago.

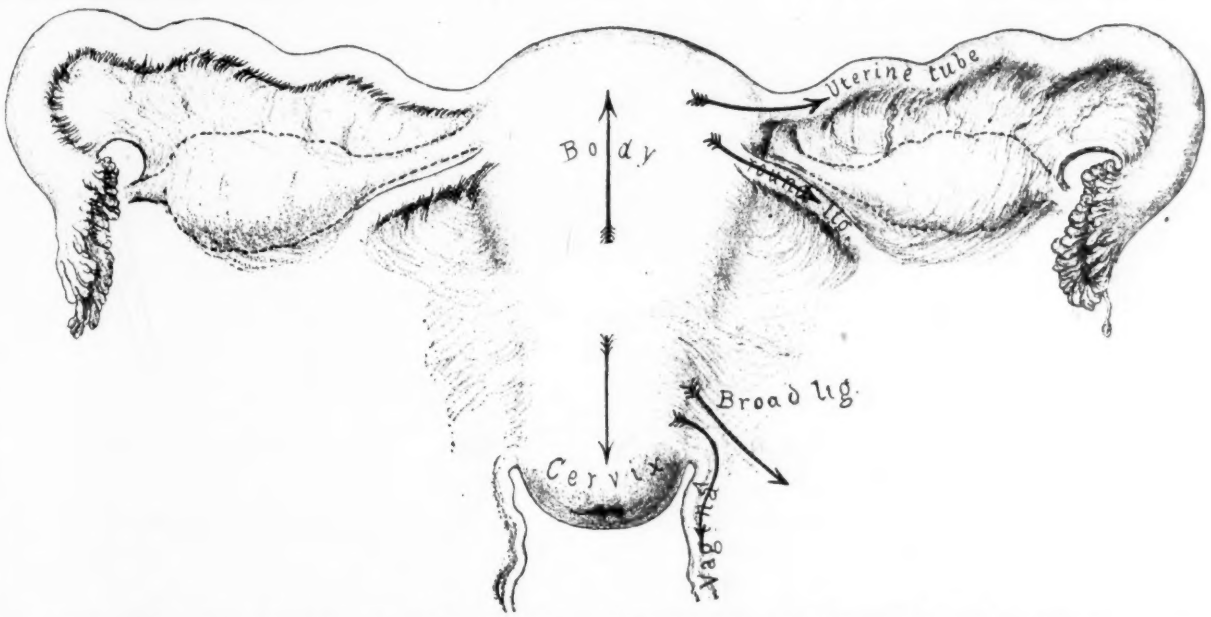

Fig. 1.—Cervical section of the uterus showing the directions in which a cancerous form in the cervix may spread down the vagina, up into the uterine body and out into the broad ligament, following the direction of the arrows. A cancer of the body in its advanced stage often follows the direction of the upper arrows out into the tube or down the round ligament as well as down toward the cervix.

In citing my statistics in answer to this query let me say that I have included only those cases in which the uterus has been subjected to a rigid microscopic examination at the hands of Dr. T. S. Cullen, my associate professor of gynecology. I know of others still older and in perfect health where there was no doubt as to the diagnosis, but I have not included them, as the entire group of cases operated on at that time has not been rigidly criticised microscopically.

Of this special group of my cases so examined there are 103 operated on and divided as follows: well, without relapse, Jan. 1, 1900—squamous-celled carcinoma of the cervix, 61 cases, 13 in all living or 21 per cent.; adenocarcinoma of the cervix, 12 cases, 2 in all living or 16 per cent.; adenocarcinoma of the body, 30 cases, 19 in all living or 63 per cent.

SQUAMOUS CARCINOMA OF THE CERVIX.

Gyn. No.	Gyn. Path. No.	Time since operation. Years.	Months.
2294	78	6	2
2452	109	6	0
4489	1244	3	6
4806	1384 and 1396	3	1
5286	1764	2	6
5577	1936	2	3
5853	2142 and 2152	1	10
5959	2263	1	9
6368	2611	1	3
6492	2706	1	0
Sanitarium.	2771	1	11
6560	2782 and 2794	1	0
6656	2890	0	10

I advance no other argument than the bare presentation of these facts: *17 out of 34 patients are well without any sign of a recurrence, at periods extending from three to six years, and 8 over five years since operation*—an eloquent tribute to the success of the radical operation, which would still be justifiable if only a far smaller

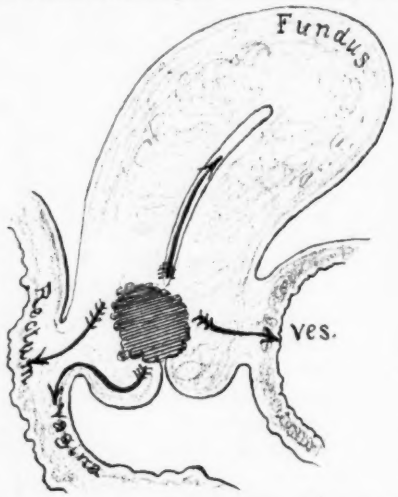

Fig. 2.—Shows the lines of possible progress of the disease in a sagittal section of the uterus forward into the bladder, down into the vagina, up into the body, and back into the rectum.

percentage of the number could be saved from a life of such dreadful suffering with its inevitable outcome.

Granted then that an operation is justifiable, what particular form of operation gives us the best chance of success? Manifestly that procedure which, with the least immediate risk, enables us to give the diseased area the widest possible berth.

Let me then lay down the following dicta, which have been my guiding principles, for your consideration:

The old plan of skinning or shelling out the bare uterus is of all methods the most liable to be followed by a recurrence, and must be abandoned.

Distasteful as my pertinacity on the next head may be to many who care nothing for cystoscopic work or its methods, I must insist *on the supreme importance of catheterizing the ureters, as I have done in all these cases, in order to mark them out during the operation and to enable the operator to work boldly instead of timidly in the parametric tissue.*

It is true that it is possible to distinguish the ureters without the bougies, during an abdominal operation, but it can not be done with the same facility, or indeed with any facility whatever; the operation is delayed and the ureter can not be pushed aside as it can when it is splinted by the bougie. In a vaginal operation the difficulties of recognizing the ureter are sometimes almost insurmountable if it is not catheterized. This plan, first put into practice by Pawlik, by slipping a bougie into the ureter through a director and through the water-distended bladder, has for the first time been generally practicable as a routine procedure by my aërocystoscopic method.

Further, *the disease must be given a wide berth by ligating far out in the parametrium and, if necessary, dissecting out the ureters,* and *on the vaginal side by cutting far below the manifestly affected area.*

I have now gone as far as I am able to go with assurance; if these principles are borne in mind any operative proeedure whatever, which is based upon them, will give results vastly better than those we have secured hitherto. Clark's operation, so thorough in its wide dissection, must receive a most careful consideration.

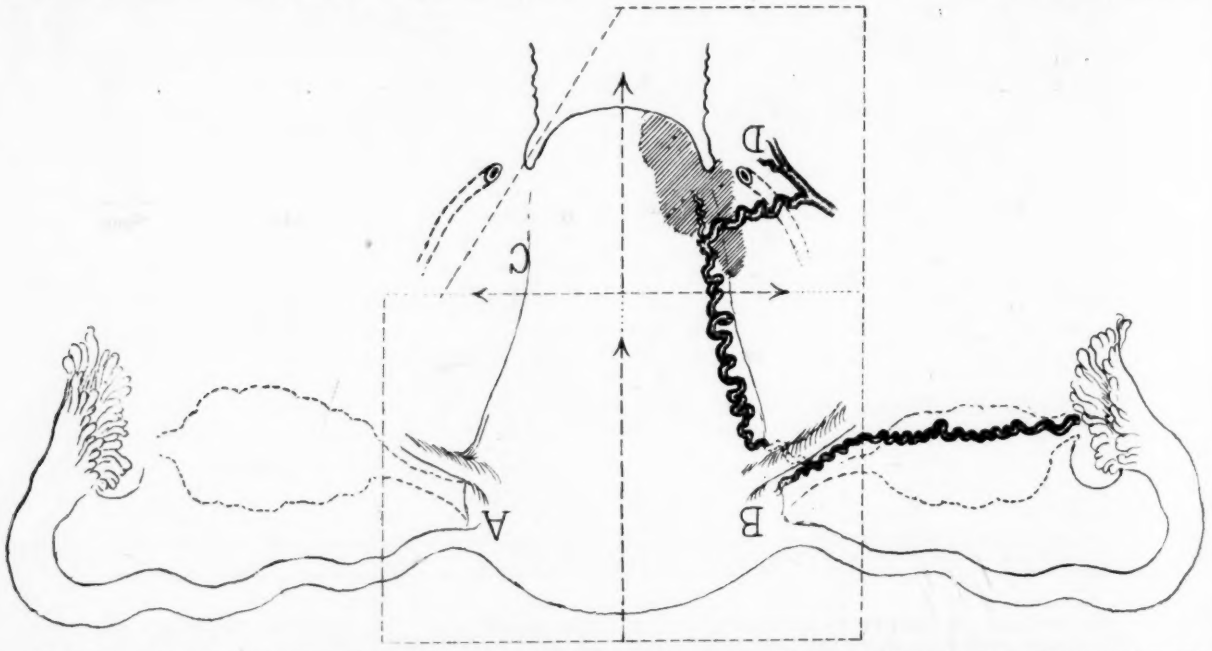

Fig. 3—Shows the method of extirpating the disease by quadrisection of the uterus. The uterus is first bisected vertically, and segments A and B are removed by cutting out into the broad ligaments, controlling the uterine vessels, then pulling them up in turn and catching the ovarian vessels, removing the entire uterine body in this way. Segment C is next removed, keeping the ureter under touch and giving the cervix a wide berth in tying out into the broad ligament. The real operation begins, however, with the removal of the last segment D, in the side of the infiltration of the broad ligament, and this is done with the sacrifice of all the tissue out to the pelvic wall, including the ureter if necessary.

A large series of statistics must show us just how often glandular metastases are to be found in operable cases, then by comparing this fact with the increased risk to life from the more prolonged difficult abdominal operation, we will be in a position to decide whether the immediate danger incurred is or is not less than the risks of recurrence of the disease in the glands.

Having in mind the risks of inoculation of the cancer in the cellular tissues, X. O. Werder, of Pittsburg,

Pa., has devised an admirable operation which is at present being extensively tried by Dr. W. W. Russell, my associate professor of gynecology in the Johns Hopkins University. This consists in a combined abdominal and vaginal enucleation, opening the abdomen and ligating and freeing the uterus on all sides, together with the upper part of the vagina. The removal is then affected *via* the vagina, by simply pulling the cervix well down to the vulva and cutting through the vagina at the lower limit of its detachment. In this way there is the least possible contamination. I have tried this operation and am greatly impressed by it.

My most earnest efforts have, however, been turned in another direction, and I will close by briefly describing the operation which I have recently devised and practiced in the cases cited at the end of this paper.

There are two major steps in the procedure:

1. The removal of the tissue down to the side where the infiltration extends deepest.

2. The concentration of all the energies of the operator to the completest possible removal of this last segment.

The steps of the operation are these: Thorough curettage with a serrated spoon curette, division of the vagina on all sides an inch below the diseased area; separation of the vagina from the bladder up to the vesico-uterine peritoneal fold, which is widely opened; a wide opening of the posterior cul-de-sac. The uterus, now hinged by its broad ligaments, is brought out through the anterior opening as in Martin's operation on the adnexa. This is easily done by pushing back the cervix and climbing up the anterior face of the uterus, step by step until the fundus is reached, with stout-toothed forceps. The peritoneum posteriorly is well protected by an abundant loose gauze pack. The next step is the sagittal bisection of the uterus from the fundus through the cervix and the attached vagina, with scalpel and scissors. As the uterus is cut in halves in this way, each median surface is grasped and held down by a strong-toothed forceps. One half, the most affected, is now allowed to retract into the vagina, while half of the body of the uterus of the other side is removed by bisecting it horizontally at the cervical junction, cutting from the median cut surface out into the broad ligament and exposing in this way the uterine artery, which is clamped. The upper half, the body, is now grasped afresh on the cervical side and pulled upward until first the round ligament then the ovarian vessels come into view and are clamped. when this quadrant of the uterus is removed. The opposite quadrant, that is to say the other half of the uterine body, is next removed in the same way. The uterine vessels are now ligated, and the ovaries and tubes are removed after ligating the ovarian vessels near the pelvic brim. The side of the cervix least affected, and there is generally a marked difference, is now removed, carefully tying the vessels as they are exposed and keeping the finger constantly on the ureter.

The steps of the operation thus far described have as a rule been easily and rapidly carried out. Three-quarters of the uterus have been removed and the remaining quadrant, that side of the cervix where the infiltration is most marked, now remains to be extirpated also, completing the operation.

In reality so important is this last step that the operation—*sensu strictiori*—may at this point be looked upon as only having just begun. All the skill and dexterity of the operator must now be concentrated on the effort to secure the most thorough, wide extirpation of the remaining nodule. In order to meet this supreme indication and to fight the disease in the only stronghold where its invasion has given it a firm hold on the tissues, the extirpation of the three portions of the uterus, that is to say, the entire body and half the cervix, has afforded a maximum space, while the bisection allows the remaining mass to be rotated downward and outward within easier reach.

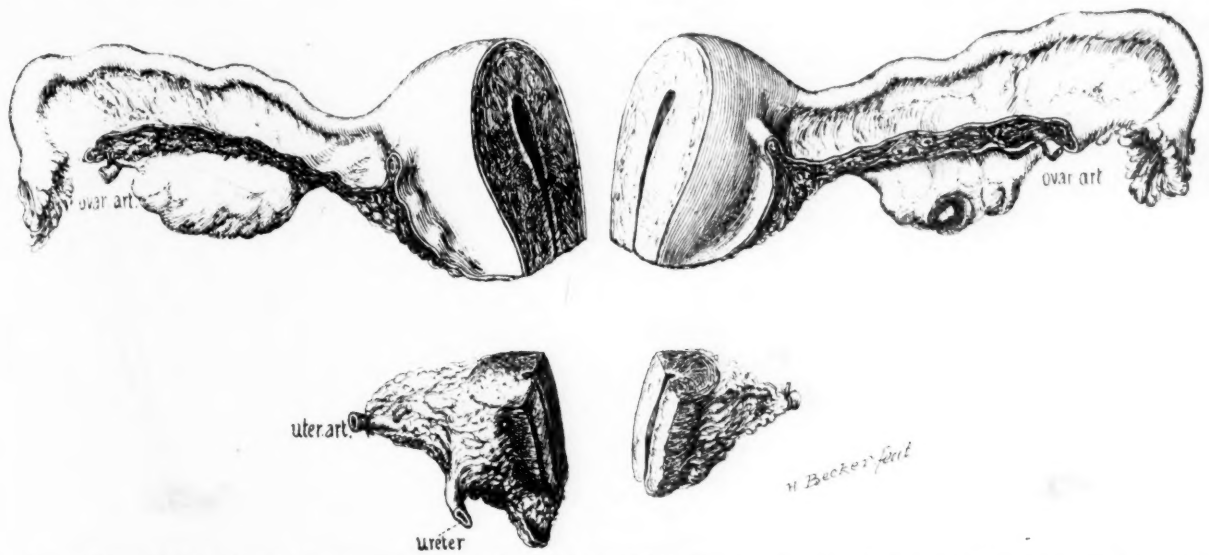

Fig. 4.—Shows the four pieces of a cancerous uterus extirpated by quadrisection. On the right side a large section of the ureter has been removed with the cervix.

It is a question with me whether ligature or cautery offers the best chance to go deepest into the tissues in meeting this supreme indication. The ureter will as a rule be bared, and if it is clearly involved in the disease it should be sacrificed without compunction, cut off and reanastomosed into the base of the bladder farther back. The operation may then proceed just as if the ureter did not exist, and the enucleation may be extended all the way out to the pelvic wall. It is my practice, after the completion of the enucleation, to close the wound in the middle and draw down both sides. In simpler cases I close the peritoneum without a drain.

The following cases have been operated on in this way:

CASES TREATED BY QUADRISECTION OF THE UTERUS.

F. J.,	Nov. 7,	1899,	Gyn.	No. 7351
S. S.,	Nov. 14,	1899,	"	" 7370
E. J.,	Nov. 14,	1899,	"	" 7371
S. T.,	Nov. 18,	1899,	"	" 7384
E. M.,	Nov. 29,	1899,	"	" 7405
K. H.,	Nov. 30,	1899,	"	" 7411
M. J.,	Dec. 21,	1899,	"	" 7428
M. H.,	Jan. 10,	1900,	"	" 7495
I. B.,	Feb. 24,	1900,	"	" 7582
C. H.,	Mch. 28,	1900,	"	" 7674
M. W.	Apr. 2,	1900,	"	" 7564

All recovered.

I have frankly and without reservation put before you all my own work and my own thoughts on this subject, and I shall be abundantly rewarded if I succeed in inducing some of those present to express their views and throw some light from their large experiences on what is still one of the darkest chapters in surgery.

1414-1418 Eutaw Place.

DISCUSSION.

DR. HENRY C. COE said that he had met with much disappointment when doing the old operation of skinning out the uterus. He believes the radical operation of the future will be an abdominal hysterectomy, as this is the most scientific cutting operation known to-day. The great difficulty is to decide, at the time of operation, between simple inflammatory tissue, and that the seat of malignant degeneration. Dr. Byrne's method of treatment by the application of the electrocautery seemed thoroughly rational, and more than this, is supported by a series of brilliant results achieved by Dr. Byrne himself. Regarding the mode of extension, he does not feel sure that cancer of the uterus always extends by continuity. For example, when the radical removal of a small circumscribed malignant adenoma by abdominal hysterectomy is quickly followed by recurrence in the scar, the explanation, on that basis, is difficult.

DR. EGBERT H. GRANDIN spoke of his personal experience with cancer of the uterus. Although that with the diseases of women has been large, he has seen comparatively few cases of carcinoma uteri—only 48. In 30 of these the bladder, rectum and broad ligaments were involved, and he did not feel justified in resorting to a major operation; he is disposed to believe that, in these advanced cases, the less done the better. Of the 48 cases, 18 were suitable for operation. For carcinoma of the body, total hysterectomy has been the operation of election, and was done in 12. He has been able to trace 7 of these, and has found them free from recurrence. The longest time since operation in these is six years. Vaginal hysterectomy was done on 6 patients in whom the portio vaginalis was implicated, and of the 4 he has been able to follow up, only 1 has remained free from recurrence. Vaginal hysterectomy, whether by clamp or ligature, should be rejected in cases of cancer of the uterus, because more thorough work can be done by the abdominal route. The method of the future will probably be a combination of knife and cautery.

DR. WILLIAM R. PRYOR expressed himself as opposed to the vaginal operation for these cases, nor does he look favorably on Dr. Kelly's method of doing morcellement by the vaginal route in cases of cancer of the cervix. Vaginal hysterectomy is little better than a palliative operation, yet it is attended by a mortality of from 5 to 10 per cent. His preference is for abdominal hysterectomy, and hemostasis by the ligation of the internal iliac arteries.

DR. P. H. INGALLS, of Hartford, Conn., said that most of the cases coming to him were far advanced. A partial operation, as with the cautery, seems to him to rather aggravate than alleviate the condition. Operations for cancer of the body have done better in his hands than those for cancer of the cervix.

(To be continued.)

CLEFT PALATE.

A NEW URANO-STAPHYLORRHAPHY.

BY ALEXANDER HUGH FERGUSON, M.D.

Professor of Surgery, Chicago Post-Graduate Medical School; Surgeon-in-Chief, Chicago Hospital.

CHICAGO.

STAPHYLORRHAPHY.

In 1764 a French dentist, named Le Monier, proposed for the first time to close the cleft in the soft palate by paring the edges and stitching them together, which was successfully carried out by the elder Roux of Paris in 1819. In 1820, Warren of Boston, and independently of Roux, brought before the profession a similar but somewhat better operation, which he had successfully performed. So closely do the two resemble each other in principle and technique that it might well be called the Roux-Warren staphylorrhaphy. This operation was followed by the best surgeons of that time, for about a quarter of a century by such men as Stevens of New York, Mettauer of Virginia, Wells of South Carolina,

Fig. 1.—Mouth Gag.

Gibson of Philadelphia, Hossack, the younger Warren, Mütter, and Pancoast in this country. Among the surgeons abroad who performed this operation may be mentioned Graefe, Dieffenbach, Sédillot, Liston, Fergusson and Polloch. Fifty-six years ago Sir William Fergusson of London made the first marked improvement on the simple vivification and suture operation. He recognized that the tension on the ligatures was a great cause of failure, and decided that this tension was due to the contraction of the levator palati, palatopharyngei and palatoglossi muscles. To relieve this tension he divided these on either side. He devised a hoe-shaped knife, with which he severed the levator palati muscles by passing it behind the soft palate and cutting from behind forward. In this connection Fergusson was the first to make careful dissections of cleft palates on cadavers. The excellent results obtained by him were also secured by other surgeons who had followed him. His operation super-

seded the Roux-Warren one for several years. The next improvement recorded was in 1860, by Dr. Agnew, of Philadelphia, who pointed out that the tension of the soft palate is in a measure dependent on the contraction of the tensor palati muscles, and these he cut by making an anterior incision close to the hamular process of the sphenoid bone, and thereby obtained marked relaxation. About the same time Dr. Polloch of London carried out a similar procedure. From the ease with which the anterior incision could be made and the fact that it cut the lowermost fibers of the levator palati muscles as well, it soon became a favorite. With the exception of a flap-splitting of the soft palate, carried out by many surgeons, nothing new appeared on this subject until Dr. T. W. Brophy, of Chicago, introduced the application of lead plates to the soft palate, which bear the strain of the sutures, thus preventing muscular contractility and tension. He finds it unnecessary to cut the muscles on either side, and maintains that it is harmful to sever them.

URANOPLASTY.

Staphylorrhaphy was an established procedure in surgery before the closure of the cleft in the hard palate was attempted. Before fifty-seven years ago obdurators were freely used. Dr. J. Mason Warren, of Boston, in 1843,

Fig. 2.—Crowding procedure for a wide cleft. A, A, gauze crowding the muco periosteal flaps toward the center.

published his method, which consisted in paring away the mucous membrane of each side, raising the flaps of mucous membrane from the bones and suturing them together. Langenbeck effected an improvement by raising the periosteum with the flaps and by making two lateral incisions, one along each alveolar process. In 1873 Sir William Fergusson came on the scene again with his ingenious osteotomy of the hard palate in its entirety, pared the edges of the segments of both hard and soft palate, and brought them together at one sitting, thus completing his urano-staphylorrhaphy. Mason, in 1874, suggested some slight improvements in Fergusson's operation. Garretson of Philadelphia applied to the jaws a horseshoe-shaped clamp, and with it forced the jaws together by means of a screw similar to that of Hainsby. Billroth frequently crushed the hamular processes together, and Wolff utilizes the alveolar processes to close the cleft. Lannelongue constructed a flap, in unilateral cases, from the mucous membrane of the contiguous surface of the nasal septum.

The Davies-Colley method I have performed a good many times, and like it very much. The cleft is bridged across by means of two flaps. One flap is raised laterally, its outer border being free, while it is left attached at the margin of the cleft. It is then turned upward into the cleft, its mucous surface looking toward the nasal cavity. The flap on the other side is raised like a tongue, its anterior end being free, and is brought across to the opposite side underneath the first flap, raw surface to raw surface, and there fastened with a few sutures. It is an excellent plastic operation.

Brophy's Method (*Park's Surgery*).—This consists in forcing the two superior maxillæ together with stout silver wire fastened to a lead plate, one placed on the outside of each alveolar process. The approximation is effected by twisting the wire over one of the lead plates. The usual vivification of the segments is made, and sutures applied in the ordinary manner. In infants this operation is feasible. Its author claims but little shock, and excellent results. C. B. Porter, when patients have teeth, uses a vulcanite plate in the mouth to protect the soft palate (Warren-Gould's Surgery, Vol. ii, p. 26). Fillebrown makes an incision along the alveolar processes, raises two muco-periosteal flaps, turns them toward the center of the cleft, and there fastens them together with mattress sutures of silver wire, the edges being vivified and sutured with fine silk.

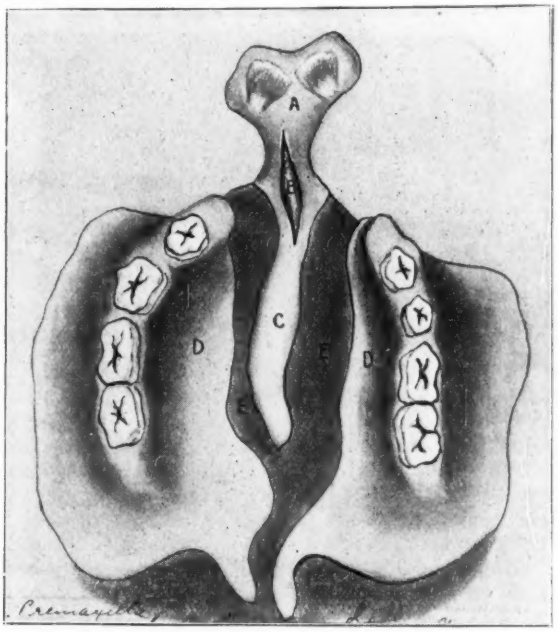

Fig. 3.—Os incisivum. A, premaxilla; b, incision to the bone; d, d, segments; e, e, clefts; c, ethmo-vomerine septum.

Instruments.—The only new instrument I wish to present is a mouth-gag (Fig. I), which I devised and find suitable for all cases. It is small, strong, opens widely, is easily inserted into the mouth, quickly closes, does not strike against the shoulder and lies close to the cheek.

Preparation of Patient.—Adenoids, enlarged tonsils, nasal catarrh, bronchitis, malnutrition, etc., should be treated first. The child should be in the best attainable condition locally and constitutionally before an operation is advised. The day before the operation a dose of castor-oil and a few doses of strychnia should be administered. Irritating the mouth with antiseptic lotions for several days previously is contraindicated.

Age.—In my opinion, all operative procedures on harelip and cleft palate should be completed before the

child begins to talk. The earlier the congenital deformity of the palate is rectified, the less defective will be the speech. In infants a few weeks old the mouth is small, the tissues are friable, and there is a tendency for the flaps to slough. Should the cleft be wider than half an inch, the complete closure of it is not undertaken at the first sitting, but one or more crowding operations can be done to lessen it. (Fig. II.) In this case Langenbeck incisions are made, and iodoform gauze firmly packed into the wounds and beneath the muco-periosteal flaps in such a manner as to crowd them toward the center until they touch. When this is properly done the gauze will remain in place for a week or more. It is not removed until it begins to loosen, after which a second packing may be inserted, but usually this is not necessary, for the new granulation tissue is sufficient to hold the soft structures in their altered positions. Three or four weeks should now elapse before operating again. The palate bones are allowed to become covered over with firm fibrous tissue segments. The crowding operation is most suitable in a class of cases otherwise very difficult to treat, that is, when the segments are horizon-

Fig. 4.—Supra-maxillary osteotomy. A, osteotome; b, cleft on one side.

tal, and the roof is like a Norman rather than a Gothic arch. The flaps in this class of cases are shorter, and by the older methods great traction is employed to bring the pared edges in apposition, hence the frequent cause of failure. When the bony edge of each segment is not well covered by mucous membrane, even though the cleft is narrow, a crowding operation is done as preparatory to the final closure of the cleft in order to obtain flaps sufficiently thick and well nourished to insure success. The more vertical the slope of the palatal segments, the more favorable the case is for operation by old methods.

Os Incisivum and Harelip.—The os incisivum, also called the premaxilla and intermaxilla, protrudes in the center in double harelip, and in single it often protrudes to one side, where it is attached, thus raising the nostril on that side far above the level of its fellow. This deformity has been dealt with in various ways. When met with in infants it is my practice to deal with it before operating on the cleft palate, but in older cases nothing is gained thereby, and then I repair the palate first. When possible, the intermaxillary bone is preserved. A V-shaped section is removed from the vomer subperiosteally (Fig. III), through a longitudinal incision, the bone nicely fitted in between the superior maxillæ, and held there by means of a strong silver wire, taking care to pare off the edges on each side so as to obtain bony union if possible. If, however, the harelip operation is

Fig. 5.—Position of surgeon and patient.

done early, it may not be necessary to perform any operation on the vomer, for in some cases it will be found that the os incisivum has receded to nearly its normal position. When the deformity is one-sided, it is easier to lower one nostril than to raise the other. This is done

Fig. 6.—First step.—A, A, flaps hinged by the mucus membrane on the nasal aspect.

by making a supramaxillary osteotomy, as represented in Fig. IV. Here, too, when the harelip is closed in the infant, the deformity is greatly improved and the osteotomy may be obviated. In the development of the child the union of these bones naturally takes place from before backward, so that by repairing the harelip and wait-

ing a few months the alveolar cleft is very much lessened.

Ethmovomerine Septum.—The ethmovomerine septum is frequently very deficient or entirely absent. When present it materially facilitates the execution of plastic work in the roof of the mouth, by utilizing its mucous membrane.

Fig. 7.—Second step.—A, A, flaps coapted by three sutures and fourth one being inserted.

A NEW URANO-STAPHYLORRHAPHY.

The operation which I now wish to describe has been carefully studied and practically developed. It was done on fifty-three patients, extending over a period of eleven years. In 1889 I successfully performed it on three sisters. In one the defect extended through the soft palate alone, and in the other two the hard palate was involved, but not the alveolar process. Since then I have managed to prepare my patients so that finally in nearly all of them I could perform my operation, resorting to the crowding operation to this end.

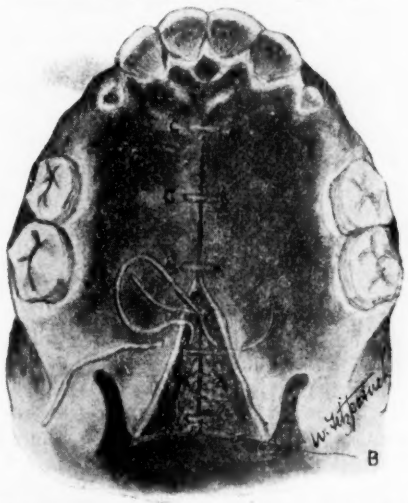

Fig. 8.—Third step.—a, a, flaps inserted into nostril; B, last stitch of first row; C, C, C, second row of sutures being inserted.

Wrap the child in a sterile sheet with its arms extended along its sides; fasten a towel wrung out of a bichlorid solution around the head, or put on a rubber cap; place it on a table with a headpiece that can be raised or lowered; administer chloroform drop by drop; mop its face, mouth and throat with equal parts of alcohol and water; with a 4 per cent. cocain solution on cotton, touch the palate and pharynx; if secretion is profuse, give a hypodermic of atropia, the dose to suit the age of the patient; insert the mouth-gag; sit at the end of the operating-table, with the patient's head well thrown back (Fig. V), and you are ready for work.

The anesthetizer has a difficult task to keep the patient well under the influence of the chloroform, and also allow the surgeon sufficient time to work. It necessitates a wide range of the degree of narcosis, thus coming to and going under alternately, but this fluctuation in the administration of the chloroform is much safer than keeping the patient constantly in a state of surgical anesthesia by spraying the chloroform through a nostril.

OPERATION.

1. *Making the Flaps.*—With a slender, slightly curved, narrow-bladed knife, cut through the mucous membrane of the mouth about one-sixteenth inch from the edge of each segment, and divide all the soft structures to the mucous membrane on the nasal aspect of the palate, but not through it. (Fig. VI.)

2. *First Row of Sutures.*—With a small, round, fully curved needle, not larger than one-half inch between the eye and the point, held in a suitable needle-holder, and threaded with fine silk, closely insert inter-

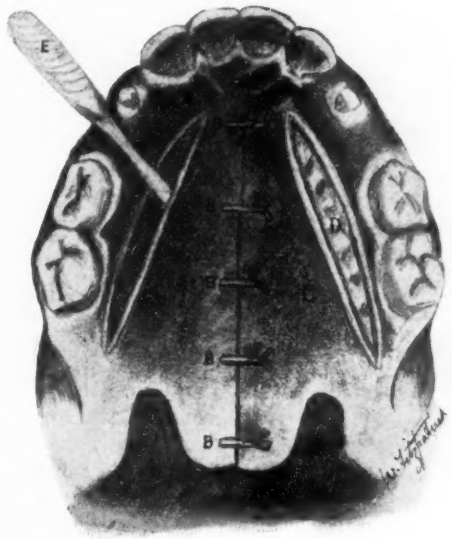

Fig. 9. Fourth step—B, B, B, B, etc., second row of sutures tied; C, C, muco periosteal flaps; D, gauze packing; E, periosteal elevator; (a), the flaps and first row of sutures are no longer to be seen.

rupted sutures by passing the needle through the free borders of the flaps from the mucous surface to the raw, and from the raw to the mucous surface, and tie them as you proceed from before backward, all the knots being situated on the nasal side. (Fig. VII.)

3. *Second Row of Sutures.*—Take the same needle and needle-holder and complete a row of interrupted stitches of horsehair on the buccal surface of the palate from the tip of the uvula forward, and tie them where apposition is possible without tension. The soft structures of the hard palate can not usually be brought together until the next step of the operation is taken. (Fig. VIII.)

4. *Muco-Periosteal Flaps.*—Place the forefinger of the left hand on the hamular process; take a short, strong, slightly curved, narrow-bladed knife, and make a curvilinear incision on one side, beginning just behind the hamular process, cutting down to the bone and extending forward along the alveolar process, as far as desired; prevent hemorrhage by pressure with the finger and gauze; rapidly raise the muco-periosteal flap, with a strong periosteal elevator, from the segments of the hard palate, and immediately pack the wound firmly

with iodoform gauze. Repeat this performance on the opposite side, and tie the horsehair stitches not already secured. The soft structures of the hard and soft palate are beautifully held in apposition without tension on the stitches. (Fig. IX.)

In packing the iodoform gauze in the wounds, fixation points are obtained by forcing some of it into the bone, also between the teeth and under the mucous membrane. If this is properly carried out, the gauze will remain in place for a week, and sometimes longer. It is removed when it becomes loosened, by which time it has generally fulfilled its usefulness. A second and occasionally a third packing may have to be inserted.

It will be observed that this is not a flap-splitting but a flap-formation operation, the flaps carrying with them two narrow strips of the firm, strong, buccal mucous membrane of the palate, which holds sutures securely, and when they are turned upward and held in coaptation by means of the first row of sutures they form an ideal protecting roof to the raw surfaces beneath them, and afford twice the width of denuded tissues for apposition, and the nasal mucopurulent discharge is shed off to either side. (Fig. X.)

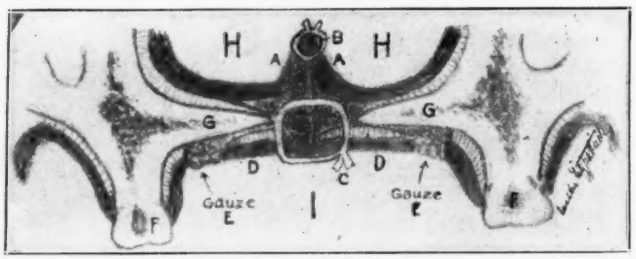

Fig. 10.—Supposed transverse section when operation is finished, A, A, flaps made and turned into nostril; B, first row of sutures; C, second row of sutures; D, muco-periosteal flaps coapted by C; E, E, gauze; F, Garth; G, Segments of bone (palate); H, H, nasal cavities; I, mouth.

After-Treatment.—Every two or three hours the mouth is to be cleansed with a feeble antiseptic solution, such as boric acid, etc. The child readily takes to whisky and water, which is given after taking nourishment, to wash the liquid food off the area operated on. Nutrient enemata are to be administered if deemed necessary, and the stitches removed not earlier than the twelfth day. If the patient cries much, we should keep it quiet with an opiate. A special nurse, experienced in caring for cases of this nature, should be employed.

Cases Suitable for the Operation.—1. The cleft in the hard palate must not be wider than half an inch, but if it is, a preparatory crowding operation is done first. 2. The mucous membrane covering the inner edge of each bony segment should be thick and well nourished; if not, the crowding operation is resorted to primarily. 3. It is suitable for all clefts in the soft palate.

Commendable Features.—1. The results are vastly better than I have been able to obtain by any other method. I have had only one primary failure. 2. No tissue is removed. 3. Very broad raw surfaces are coapted. 4. The danger from sepsis is minimized by turning the flaps upward, as described.

Disadvantage.—It is more difficult to perform.

ONE OF the features of the Paris daily, the *Figaro,* is a column each week devoted to a summary of the leading articles in the principal medical journals. It is written over a pseudonym by M. de Fleury, a well-known physician and contributor to medical literature, and presents, in popular style, the latest medical achievements.

A CASE OF HYSTERICAL HIP-JOINT.

BY JOHN LINCOLN PORTER, M.D.

Instructor of Orthopedic Surgery, College of Physicians and Surgeons, CHICAGO.

Miss E. H., a schoolgirl, 11 years old, came under observation Jan. 24, 1898, with the following history: She had had measles, chicken-pox and whooping-cough in childhood, and scarlet fever three years before I saw her. After this she had severe headaches, pain in the upper dorsal region and "trouble with her stomach." The gastric disturbance consisted of attacks or crises, occurring at quite regular intervals of about a month, with headache, eructations, sometimes vomiting, and pain of an intermittent character in the abdomen; and with this was extreme nervousness amounting at times to nervous storms. These attacks lasted for two or three days, and rapidly passed off, leaving the patient in good health. She had never menstruated. In September, 1897, she began to complain of pain in the right hip, and these pains recurred, with intervals of perfect comfort, for six months; then a slight limp developed, which had been gradually getting worse, though she had been up and about as usual all the time.

FIGURE 1.

Family History: There was no history of tuberculosis, syphilis or insanity in either branch of the family as far back as, and including, the grandparents. Both parents were living, also five other children, all of whom were in apparent good health. The mother and her four sisters were all of very nervous temperament and subject to severe headaches.

Condition on Examination.—The patient was a red-haired, blond girl of fairly good development for a girl of 11 years, and apparently anemic. She had large, full eyes, with a restless expression, was alert and quick-motioned, looked at every one and all approaches with suspicion, and clung to her mother in a timid manner. She would not talk, but answered direct questions with a shake or nod of her head. Her standing position and gait at once attracted attention (Figs. 1 and 2), for she stood with the right thigh flexed and rotated outward, and only the toes touching the floor. In walking the same position was maintained, the weight being carried on the toes, *but the flexion increased each time the weight was borne by the right leg.* On inspection, the affected hip and leg seemed perfectly normal, there be-

ing no swelling. The length of the two legs was the same, *but the circumference of the right thigh was one-half inch greater than that of the left one.* The latter was easily flexed, rotated and put through the normal motions, but as soon as any motion was attempted in the affected leg a resistance was felt. This resistance was vibratory in character and corresponded exactly to the amount of force exerted by the examiner; for if the leg was forcibly flexed and suddenly released it assumed extension without any evidence of pain. Fig. 3 shows the amount of flexion secured after repeated examinations, through coaxing the patient to help and using a little force. If the forcible flexion was continued until all resistance was overcome, the thigh went up into normal flexion on the trunk and could be rotated freely. Though she covered her face with her arms and cried a little, she did not shed tears or give indications of pain.

Dr. Ridlon and myself have forcibly flexed the thigh on the pelvis several times, and if flexion was maintained until she found that resistance was useless, it ceased. *No acute symptoms whatever followed the forcible manipulations.* Fig. 4 shows the affected leg completely extended in Thomas-test position. The foregoing examinations, together with the absence of any objective indication of intra- or para-articular disease, such as swelling, thickening of the tissues or local elevation of temperature, gave the findings on which a diagnosis of hysterical hip-joint was made.

FIGURE 2.

In discussing the differentiation and the later developments that proved the diagnosis, I shall consider only tubercular hip disease and hysterical hip. The chronic nature of the case, persisting for more than a year, with no history of injury, or of any acute inflammatory symptoms, will exclude traumatism or acute infectious arthritis. The measurements, the symmetry of the two hips and the gait exclude coxa vara. In making a differential diagnosis we must consider chiefly the etiology, symptomatology and, in certain cases, the result of treatment. The symptoms have been brought out in the foregoing examination, and as to etiology, the absence of any tubercular predisposition, inherited or acquired, such as is found in a large percentage of tubercular joint cases, and also the lack of any traumatism, must be noted. But on the other hand, she is a young girl of marked neurotic temperament, as evinced by her every action: and where there is added to this a family history which is decidedly of this type, we have a combination that more than suggests a strong neuropathic element. I have been unable to make any satisfactory examination for anesthetic areas in her, she would not keep her eyes closed a moment, and when blindfolded, the nervous tension and lack of control was so great that she was twisting and writhing about continually, and no definite information could be obtained, but her whole behavior was such that this element was clearly shown. In a tubercular joint where the disease has not progressed far enough to produce any fulness, thickening, or other objective signs about the joint, some passive motion is usually possible and often quite free in some direction, and the resistance which is encountered is a muscular rigidity, that is peculiar and is felt suddenly when the limit of painless motion is reached, but here there is no true rigidity, only a resistance of a vibratory character, to all passive motions, that corresponds in power exactly to the force exerted by the examiner. In true hip disease the limp often appears before any pain is felt, while here the pain, of an intermittent type, was noticed six months before the limp. Then, too, the limp in early hip disease is due to incomplete extension of the thigh on the pelvis as the body is carried forward, and the patient walks on the sole of the foot; while in this case, the patient stands with the leg flexed and abducted with only the toes on the floor, and limps because the leg is shortened by the flexion. Furthermore, I believe no hip disease ever progresses to a flexion deformity of 40 degrees without some abnormality being evident about the joint. When asked if she had any pain, she nodded and put her hand on the anterior outer surface of the thigh and calf, the very places where muscular fatigue would be felt from constantly maintaining the flexed position and constrained gait. In 90 per cent. of cases of early hip disease the pain is either in the joint or referred to the inner surface of the knee. Firm pressure over the trochanter, driving the head of the femur into the acetabulum, produced no pain in this case, as it usually does in hip disease.

Atrophy of the thigh and calf muscles, which is *always* an early accompaniment of hip disease, was not only lacking, but, as noticed above, the circumference of the affected thigh was one-half inch greater than that of the other. This was confirmed by measurements made by others at different times.

The above differences would be sufficient to exclude hip disease, but out of curiosity I tried the following trick maneuvers: with the patient standing, I asked her to flex the affected thigh so as to lift the toes off the floor; she made a few feeble attempts, lifted the knee an inch or so, and stopped. Then I asked her to sit on the table, and she did so with the thighs flexed to a right angle without any apparent discomfort, and perfectly unconscious of the significance of the change of position. Again, with her lying supine on the table, and maintaining the constant slight flexion of the thigh, I made an effort to slowly increase the flexion, asking her to help by bringing the leg up, but she resisted and whimpered and said she could not. I at once asked her to sit up, and she did so easily, with her legs straight and before her, thus producing a voluntary flexion of nearly 100 degrees. Then I put my pencil just beyond her heel and asked her to pick it up, and she did so quickly and easily, thus bringing the thigh into complete flexion against the chest.

Another incident shows the inconsistency of these cases. Convinced that the attitude was not due to true joint disease, I tried in every way to get the patient to put the entire sole of the foot on the floor when walking,

thinking that the additional comfort thus obtained would gradually result in abolishing the flexion at the thigh, but although motion at the ankle-joint was perfectly free when she was sitting or lying down, she could not be induced to flex the ankle enough to bring the heel down on the floor when standing. Out of curiosity, I put a plaster cast on the leg from ankle to groin, at the same time correcting the flexion at the knee, knowing that with the latter extended she would either have to extend the thigh normally or flex the foot, as she could not walk on the tips of her toes with the thigh flexed. The cast was applied while she was lying on the table, and she took an active interest in the proceeding, not knowing why it was done. When she was allowed to get off the table she stood momentarily on the entire sole of her foot, and her surprise, when she could not bend the knee, was almost ludicrous. She said she could not walk, but when told that she would have to wear the cast home, finally left the room, pushing the stiffened leg before her with the toes kept persistently on the floor and the ankle rigid. I realized that she would probably discover that by tilting the pelvis and straightening the thigh she could walk on her toes; and when she came back a week later that was the attitude, except that the flexion at the thigh was not entirely abolished, and the foot was inverted, making her walk on the outside of the foot and toes. She would not voluntarily correct the position of the foot, and attempts to do so passively elicited the same kind of resistance that had been found at the hip. Later she was noticed standing on the sole of the foot, her attention being diverted to something else. During the next week she passed through one of her gastrointestinal attacks, and, when she returned to me again, the foot and leg were still held in the same position. As the cast was somewhat broken, I removed it, and the original flexion at the hip and knee immediately reappeared, and, just as quickly, the rigidity and inversion at the ankle disappeared.

As a final test in my examination of the patient, I took occasion to see her when she was asleep. In a diseased joint, the muscular rigidity and spasm persist during sleep and are only abolished by deep anesthesia, but when I reached her bedside she was lying on her side, soundly asleep, with both knees drawn up to perhaps 80 or 90 degrees. While I was estimating the amount of flexion, she turned on her face, and straightened both legs out into complete extension. Her mother then turned her on her back, and I began making passive motion with the affected leg, finding rotation free. Here she woke up and, seeing me standing by the bed, hid her face in the pillow and went through all sorts of restless movements, drawing her knes nearly up to her chin, and then extending the legs out to their fullest extent, manifesting no difference whatever between the two extremities. I did not see her again for several months; and when I did, December, 1898, some flexion and limp still persisted, but in April, 1899, her mother brought her to me to show how perfectly she had recovered; then gait and position were normal, and about the leg or hip there was no indication of any previous trouble whatever. Her mother remarked that she had taken nothing but the medicine I had first prescribed, which was a bitter tonic—I think tinctura nux vomicæ and tinuctura cinchona comp.—that I had given the first time I saw her, with the positive assurance that she would get well.

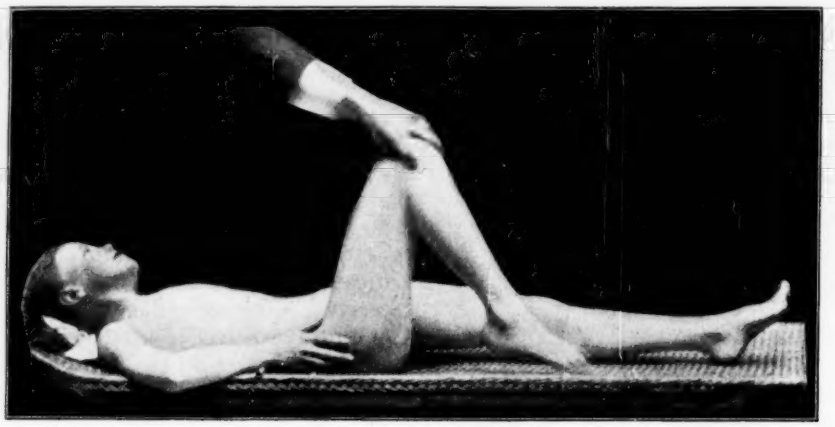

FIGURE 3.

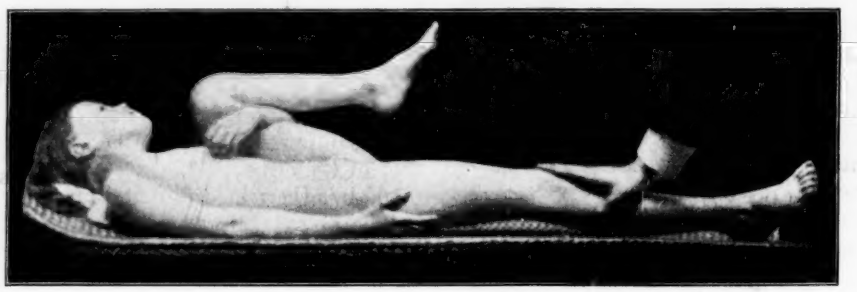

FIGURE 4.

EUSTACHIAN CATHETERIZATION.*

BY STEPHEN OLIN RICHEY, M.D.

WASHINGTON, D.C.

To quote Politzer, "Most emphatically, it frequently happens that catheterism of the tube, as a diagnostic and therapeutic agent; can not be replaced by any other method." Gruber calls it "an indispensable aid to both the diagnosis and treatment of many aural affections." In agreement with these veteran otologists, I think, of the many methods of reaching and influencing diseases of the middle ear, which form the vast majority of those for which the aurist is consulted, that no one is so important as, or has the precision and efficiency of, the catheter. This is so true, though not generally accepted, that I venture to suggest that no man should claim to do the best character of aural work unless he possesses skill and dexterity in its use; the skill to enter the Eustachian orifice with reasonable promptness, fully appreciating the effect he is producing with and through it on the middle ear and the contiguous tissues; the dexterity to do this without harm and with comparative freedom from pain, as the performance appears formidable to the patient, and lacks no element of an operation save the destruction of tissue.

In proportion as it is the more difficult to the surgeon than the Politzer and Vansalvan methods of *inflation,* is it the more precise, conservative and effective. The Politzer and Vansalvan methods, like the use of Eustachian bougies, have always seemed to me a kind of veterinary surgery; unscientific, and worthy only of indolence and incompetency. They are replete with possibilities of unavoidable mischief, though Politzerizing in modified form is justifiable with some children, in some conditions; but its explosive effects are alarming even to adults. The Vansalvan method can fortunately rarely be practiced by children, and should never be a resort, except in the presence of the surgeon, and while he is removing secretion from the middle ear through a perforated drum membrane.

In neither method can the effect be addressed to one ear alone; each method selects the ear least affected, and air with unmeasured force passes in the direction of least resistance. The effect of each is chiefly mechanical, exerting no therapeutic influence beyond temporarily overcoming a tubal stenosis, and proportionately temporarily relieving local venous stasis, *if the air does pass through the tube.*

That the force of Politzerization is often unknown is illustrated by the experience of an aurist, related by him to me some years ago. In his attempt, by this means, to free a stenosed tube, the drum membrane of the unaffected ear was ruptured.

The frequent repetition of either method in chronic non-suppurative inflammation of the middle ear often results in a flapping drum membrane, with vertigo when air enters the cavity during the act of blowing the nose, and sometimes with that of swallowing.

In cases of acute middle-ear inflammation these means may clear the tube of secretions trying to find their way into the pharynx, but only by driving them in the direction from which they have come; fortunate if they stop in the cavity, though the risk is great that, loaded with germs, they may be propelled into the antrum to cause disturbance there which might have been avoided. Neither method contributes anything to antisepsis of such secretion, thus started on its way to the mastoid spaces, into which other applications of the same kind may drive them, and thus excite a mastoiditis. It would seem that this must happen more frequently than formerly, judged by the increasing number of mastoid trephinations deemed necessary, and for which it is not pleasant to think the aurist may in any degree be responsible.

In reading the reports of cases of mastoid involvement as a sequel to otitis media acuta, I have received the impression that often the extension of the malady would not have occurred except for the mediation of this form of inflation. Mastoid complication from acute middle inflammation, even when symptoms of invasion of the antrum existed, has occurred but once in my work; and I have not had a mastoid trouble from chronic suppuration of the middle ear, unless it existed when the case came under my care. My fortune in this respect has been so great that it is not easy to find a reason for such experience unless in the methods of treatment adopted. It varies so much from that of most writers, that I do not find occasion to perform the exsections and trephinations so common now.

I *always* use the catheter in affections of the middle ear, acute or chronic, and have never seen anything but good result from it, and think the danger of introducing germs from the pharynx into the middle ear by means of the catheter, properly used, to be purely visionary. This claim has been made, but I have never seen an instance of it, and do not fear it. It might be done, but with proper precaution it is avoided. The catheter must be sterilized before introduction, and an astringent and antiseptic solution must be blown gently through it into the tube, not necessarily into the cavity the first time; indeed, generally better not. The solution dilutes the secretion it reaches, favoring its more ready escape; it more or less destroys the germs; its astringency increases the caliber of the tube, acting antiphlogistically. At the next sitting the solution may be carried farther up the tube, or into the cavity. If the drum membrane is perforated the solution may be permitted to reach the cavity at the first interview, and it will act in an equally benevolent way there. The dilution and antisepsis of the secretions, *gently done,* is the important feature.

Another purpose served by the catheter, and a wise one, is the *withdrawal* of the secretion from the tube by suction. I have, at times, removed the catheter half-full, with less once or twice more; relieving tension and pain, thus making space and more safety for the solution to follow, and sometimes aborting acute trouble, and avoiding paracentesis.

However, it is the extension of the malady beyond the middle ear which is most important, and my experience coincides with that of Dr. Burnett, of Philadelphia, who says that he "has never seen a case of acute mastoiditis following acute otitis media in which he has had charge of the treatment from the beginning." Such cases may be due either to neglect, or overtreatment; in my judgment chiefly to the practice of the Politzer method.

A number of times I have heard comments by foreign otologists upon the seeming independence of the Eustachian catheter in this country, especially in chronic suppuration.

In stenosis of the Eustachian tube, not due to adhesion, patulency of the tube has been secured by means of the catheter, in my experience, without exception, and naturally a resort to bougies seems bungling. Think of a bougie retained in this region for half an hour! Yet this has been advised.

*Read before the Medical Society of the District of Columbia, March 14, 1890.

The catheters I use are made of malleable silver, to facilitate ready adjustment of the curve of the tip to the variation in size of different nares and pharyngeal spaces. A different adjustment is often necessary for the two sides of the same person. The best sizes of the catheters are given in the text-books.

The substitution of a local anesthesia soft rubber bulb for the unwieldy Politzer bag, by requiring but one hand for its manipulation, is an advantage. By the resistance of the bulb to the hand some appreciation of the force being used and of the character of the obstruction may be gained, and the volume of air carried in may be approximated, as is not possible with a large bag.

Clamp and headband are worse than useless, like much other awkward trumpery that has been devised for use in this region. The "modified" catheter is either an attempt to compensate for the possession of thumbs for fingers, or, like the modified pessary, it is designed to record a claim to cheap glory.

ABDOMINAL SURGERY.

FIVE INTERESTING CASES: PANCREATIC CYST; HEPATIC CALCULI; FECAL FISTULAE; COMBINED APPENDECTOMY AND NEPHRORRHAPHY.

BY FLOYD WILLCOX McRAE, M.D.

ATLANTA, GA.

CASE 1.—W. R. Britt, Columbus, Ga., white, male, aged 60 years, farmer, married, was admitted July 17, 1899. His father died, he believes, of some growth in the abdomen. His mother, brothers and sisters are healthy. Sixteen years before, while in Florida, he had chills and fever for a year. About thirty years before, he was taken with sudden, excruciating pain in left lumbar and iliac regions, which persisted three or four hours, i. e., till after the application of mustard plaster. He passed bloody urine at that time. He had similar attacks four to five times a year for the next twenty years, diagnosed renal calculi.

When having an attack he has a constant desire to urinate, but voids only very small amounts. The left side always remained tender. Fifteen or twenty years ago, stepping on the hub of a wagon wheel, he struck his left side on the rim of the wheel, causing severe pain for about an hour. For the last twenty years, on considerable exertion and getting warm, as in ploughing, he has become completely exhausted, weak and nervous. During the past few years he has had a burning sensation in the upper part of the abdomen, and could not eat as much as formerly because of a sensation of fulness; no vomiting, but occasional pyrosis. No abnormal appetite nor dislike for food was present, but he has always had a tendency to constipation, and for the past year or two this has been worse, the bowels seldom moving without a cathartic. There has been no diarrhea since 1860.

When in the hospital, two years ago, he became aware that something was wrong in his abdomen, by the sensation of a moving and contraction of the bowels. Two months before admission, he noticed a mass about the size of his hand, just below the right ribs, and about the median line, above the umbilicus. He had no pain, but an uneasy feeling in the abdomen, and lost seven to eight pounds in the last four or five weeks.

After some medication, six weeks before, he had a good appetite, but food seemed to do him little good. There was a large, hard mass in the left middle abdominal region, firmly fixed, of a slight cystic feel. Diagnosis was in doubt, but malignant disease suspected, and an unfavorable prognosis given.

An exploratory incision was decided on and done the day after admission, July 18, at 9 a.m. A large cyst of the pancreas was revealed on going into the abdomen, the trocar introduced and about three pints of oily, straw-colored fluid obtained. The cyst was firmly adherent to the concavity of the spleen, which latter was slightly enlarged and displaced downward, and formed the left boundary of the tumor, thus greatly enhancing the difficulty of diagnosis. The upper and lower ends of the incision were closed with through-and-through silkworm gut sutures, and peritoneum sutured to the skin for the middle 2½ inches of incision, with fine silk. The cyst was then opened, the edges of the opening sutured to the abdominal wound with fine silk, and a large drainage-tube—rubber—introduced, containing gauze wick; this was held in place by silkworm gut sutures. Absorbent dressing was then applied and the patient put to bed.

Strychnia, gr. 1/30 every three hours, was given, and no trouble was had with nourishment, which was gradually increased from that time on, giving chicken broth, albumin, panopepton and buttermilk, one or the other, every three hours. On the second day his temperature reached 101 F., and on the three succeeding days it ranged from normal to 99.6, and 100 once or twice daily; thereafter it was normal. He was given a light diet on the sixth day. The dressings were changed as necessitated by the amount of discharge, at first twice daily, later daily, and so on.

His recovery was rapid and uneventful, and he was discharged "improved," on August 14.

CASE 2.—Mrs. C., aged 34, gave a negative family history. She had been healthy, except dyspeptic for several years, and subject to attacks of colic, or what she supposed to be acute indigestion. About six weeks prior to operation, she had a severe attack of colic, followed by "bilious fever"(?) for two weeks.

I saw her first in consultation with Dr. G. G. Roy, August 8. Examination revealed a tumor about the size of a fist, occupying the region of the gall-bladder, and extending about two inches below the ribs. There was slight jaundice. The lungs, heart and kidneys were normal. A diagnosis of gall-stone cholecystitis, was made and early operation advised.

Operation, August 9, was under ether. Coming down on the tumor I found what seemed to be an enlarged gall-bladder, but which, on examination, proved to be an enlargement of the liver itself. The growth was very hard and nodular, presenting many of the characteristics of malignancy. Dr. Nicolson, who helped me, and I were in doubt as to just what its character was. Introduction of an aspirating-needle showed that it contained a dark serous fluid, but nothing definite was determined as to its character. I immediately stitched the parietal peritoneum to the surface of the liver, leaving a space as large as a 50-cent piece, uncovered. I then packed the wound with iodoform gauze, closing the two extremities with silkworm gut sutures. The packing was left in three days, when it was removed, leaving the surface of the liver uncovered. I immediately made an opening down to a hard body in the substance of the liver, and, with a curette, removed thirty gall-stones of almost uniform size and shape. A drainage-tube was inserted, and gauze packed around it. August 4th three more stones were removed; the 16th, ten; the 20th, one; the 24th, three; the 26th, two; the 30th, two, and eight have come away since. There is still a discharging sinus, but practically no pain.

The patient has gained flesh rapidly, and weighs fifteen or twenty pounds more than she ever did, and enjoys the very best of health.

CASE 3.—D. S. P., white, male, aged 37, a stair-builder, was admitted August 9, 1898. He had been operated on for appendicitis the preceding March and a suppurating sinus remained and afterward developed into a fecal fistula, which discharged very freely, especially when the bowels were loose. This gave him some pain at times. He had indigestion all summer, but had been able to work. The bowels had been moving about twice daily.

Operation, August 12, at 1:50 p. m. The sinus was packed lightly with iodoform gauze, and an elliptical incision then made outside this tract, through the abdominal wall. The surrounding tissues were carefully dissected and separated from the sinus, which was found to enter the cecum at the base of the appendix. The latter was very large and indurated, and surrounded by a mass of inflammatory deposit. This I dissected out down to the base—"near" cecum—removed it, cauterized with carbolic acid and buried the stump in a fold of the gut with sutures of No. 7 silk, four or five tiers of these being put in. The operation was tedious, occupying two hours and fifteen minutes of uninterrupted work. Iodoform gauze wick, surrounded by a fenestrated rubber-tissue drain, was left in and the wound closed with silkworm gut. The drainage was removed and left out next day, the wound being clean. The temperature went up to 102 F. on the 14th, but came promptly down on administration of quinin bisulphate, gr. v, every four hours to seven doses, and remained normal thereafter. Recovery was uneventful, after removal of the sutures on the 19th, and the patient was discharged cured, Oct. 11, 1898.

CASE 4.—J. B. S., white, male, aged 37, a dairyman, was admitted May 16, 1899. His health was good until four years prior to admission, when, on catching a falling milk vessel, he had severe pain in the right inguinal region. This grew worse and he had to go to bed. The right leg seemed affected, always feeling better when flexed on the thigh. He was in bed three months at this time, and noticed a "lump" in his right side. About Jan. 23, 1899, the iliac region of his right side began to pain him slightly, but he had no general abdominal tenderness, nor vomiting, though the bowels could not be moved for a week. When gas accumulated in the bowels, the mass inside seemed to get larger. The right leg was still more comfortable when flexed. He was admitted with a mass in the right iliac region to the inner side of the crest extending downward—slight tenderness. The temperature was 102.8 F., the pulse 88, the tongue rough and coated. There was no appetite and some diarrhea.

Operation was performed May 18, at 2 p.m. (Dr. Nicolson). The point of tumor in the right iliac region, which would be tympanitic at times, dull at others, was tympanitic while on the table, before operation. Incision over McBurney's point reached an extensive cavity three inches long by two inches deep, which contained an ounce of creamy pus and a concretion about the size and shape of a partridge egg. The inner wall of the cavity was formed by the outer surface of the cecum, in which was a fimbriated opening admitting the index finger. The appendix was not found. The cavity was sponged clean and the wound closed with silkworm gut sutures, an iodoform gauze drain being left at its middle.

The fecal fistula was dressed daily, and oftener when necessary—sometimes four or five times daily; irrigations at times, then none; packing at times, then none—from the first operation until September 11, when the second was done. The opening in the gut could be easily felt and plainly seen with the light at a proper angle, but it closed very little under all the forms of treatment tried.

A moist gauze (saline) dressing, daily, seemed to exert the best influence over the discharge, amount, odor, absorption, and so on. A cavity holding from two ounces at first down to one-half ounce just before the operation, persisted, the contents of the bowel dropping into it from the opening in the gut and, when the cavity was filled, the dressings becoming saturated. When this cavity was well packed it seemed that the discharge was lessened, probably by pressure on the opening in the bowel.

On September 11, the second operation was performed under chloroform anesthesia by Dr. McRae, Dr. Nicolson assisting. The opening of the old fecal fistula was enlarged—mucous membrane of gut very unhealthy for an area the size of a silver dollar, about the opening in the cecum. Adhesions of the cecum to the abdominal wall were broken up, and the remainder of the appendix—about 1½ inches—also separated from a bed of adhesions. A small portion of cecum at the site of opening and the appendix were resected, and the edges of the gut brought together with a Czerny suture, and *four* or *five* layers of Lembert sutures of No. 7 black silk put in, one layer above the other. Cicatricial edges of the wound were then trimmed off and sutured with silkworm gut. Gauze drainage was put in and moist saline dressing applied. This was changed on the third day (13th), when the wound was clean, no odor; moist saline dressing reapplied.

A thin yellowish fluid oozed from the drainage wound for twelve days, necessitating a daily change of dressings. The cavity held from 1 to 1½ drams of fluid when filled. This closed slowly but steadily, and the patient was discharged, cured, on October 7, twenty-six days after the operation.

CASE 5.—Miss L., aged 29, was admitted Oct. 12, 1899. Father died of heart disease, mother of consumption, one brother of rheumatism. The patient was always delicate; subject to cold. She had had very painful menstruation. Tubo-ovarian disease existed for three years and she was in bed five months, prior to removal of the ovaries and tubes, in July, 1895. Floating kidney was found, but nothing done for its relief except directions given as to abdominal support. There was no relief from removal of the tubes and ovaries.

On July 6, 1896, I did a right nephrorrhapy, with complete relief for fourteen months, when she had a fall down a flight of steps, and partially broke the anchorage loose. This fall was followed by subacute appendicitis, and she was in bed for seven weeks. She rested up and after a few months felt as well as before injury, and resumed nursing one year after her fall, without inconvenience until March, 1898, when she had an attack of appendicitis, with high fever, and was confined to bed for two weeks. She never felt well afterward, but was about till September, 1898, when she had a mild recurring appendicitis, more or less pain all the while.

On admission, the heart and lungs were negative, but the urine showed a few hyaline and granular casts. This cleared up under treatment, till at time of operation, October 17, only two casts were found.

Operation was done under ether, the usual incision along border of rectus for removal of an appendix. Ap-

pendectomy was completed in the usual way, except closure of the abdominal incision: I separated the parietal peritoneum down to the right kidney, which was very readily accomplished. With a full curved Hagedorn needle, three sutures were put in, after incising the perirenal fat. The sutures took a "good bite" of the kidney and were then carried deeply into the muscles and brought out again. They were tied without much difficulty, and held the kidney well in place. Kangaroo tendon was used. Considerable difficulty was experienced in putting in the sutures, but this was finally accomplished in a very satisfactory manner. The abdominal wound was closed in layers and the patient put to bed in excellent condition. In some way the superficial structures were affected—evidently streptococcus infection—and the subsequent fever and prolonged convalescence were due to this cause.

She suffered much pain after operation, morphia being necessary twelve hours after it. Temperature was 101.6 six hours after operation, and the quantity of urine was very small. An enema of normal salt solution was giving on taking her off the table, and the following day alum enemata, followed in two to five hours by saline, were started and kept up daily. Strychnia, gr. 1/30, was given every three hours, and morphia was occasionally necessary. On October 20, diuretin, in 7½-gr. doses, t. i. d., was begun, and 1 gr. of calomel given at bed-time. Lithia water *ad libitum* was started next day, and she was persuaded to drink as much as possible. The quantity of urine steadily increased from day to day, from ten to sixteen ounces after operation to thirty-five to sixty October 28 to 30. No morphia was used after the 23d.

The temperature ran high after operation, going steadily up from day to day until, on the 22d, it reached 103.4. Chloroform was administered and an incision made through a hard mass in the right side over the kidney area, and about three drams of pus and some bloody serum evacuated. This was dressed daily, and temperature declined some, but never reached normal till after an exacerbation on November 8, when it went to 103.6; the high fever here remained only two days, and normal range was reached and held to from November 11.

Case 1 presents several features of especial interest. The history of repeated attacks of renal colic, and the location of the tumor, pointed to hydronephrosis: the general appearance, rapid emaciation, obstipation, age and general characteristics of growth to malignancy. I should have made a positive diagnosis of malignant disease but for the fact that the tumor seemed cystic toward the median line. Dr. Cooper, who saw the patient, made a rather tentative diagnosis of cancer of the stomach. Dr. J. H. McDuffie, the family physician, suspected hydronephrosis. Exploration of the cyst revealed no cause for its development, and the utter impracticability of its complete removal. I have kept up with the case, and while there is still a considerable discharge of pancreatic fluid, the quantity is constantly diminishing. The general condition of the patient is good.

Case 3 puzzled me exceedingly. Quite a number of the stones removed are about the size of large buckshot, highly polished, almost black, and irregularly quadrilateral. They were evidently formed in the gall-bladder, ulcerating through its roof into the liver. The adhesions were such as to make a careful examination of the under surface of the liver impossible.

Cases 3 and 4 illustrated one of the untoward consequences of incomplete operations for appendicitis. No operation for this condition, that consists in simply opening and draining an abscess without complete removal of the appendix, can be considered curative. A large proportion of such patients will require a subsequent operation to effect cure. The method of closure adopted in these two cases is worthy of further trial. In both there were extensive adhesions, great induration and thickening of the cecum. I do not believe any other method, except a complete resection of the cecum, would have proven curative. I shall in future employ the method with much confidence, in this very troublesome class of cases.

Case 5 represents an entirely new procedure, i. e., that of appendectomy and nephrorrhaphy through the same incision. I did not do the operation as I had originally planned to do it. It was my purpose to remove the appendix, separate the peritoneum, incise the perirenal fat, put my sutures in the kidney with a long, straight needle on each end of each suture, then have my assistant make a lumbar incision through the skin and superficial fascia. I next intended forcing the needles through the lumbar muscles, and tying the sutures, closing the skin and fascia over these, thus burying them. After getting down to the kidney, however, I felt sure that I could accomplish the same result without making another incision, and finally succeeded in doing so. The infection of the wound that followed was a most unfortunate circumstance. I feel sure this was due to an unguarded act of one of my good friends who is a surgical enthusiast. He came in just as I had finished putting in the renal sutures, and after explaining to him what I was doing, he thoughtlessly put his dirty hands on the operating-field. Whether the infection was due to this or some other cause I do not know. I do know, however, that it was only superficial, but very virulent, and showed a tendency to burrow. The operation of appendectomy and nephrorrhaphy is a practicable one.

I am indebted to Dr. Hal Moncrief for the histories of Cases 1, 3, 4 and 5.

ANTITOXIN AND INTUBATION WITH A REPORT OF 100 OPERATIONS.

BY BURT RUSSELL SHURLY, B.S., M.D.

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DETROIT, MICH.

The results of progress in scientific therapeutics can be most thoroughly demonstrated in the treatment of laryngeal diphtheria. The uncertain pathology of this disease has assumed a clear and definite position under the light of modern bacteriologic research. Arguments on the nature of the causative microbe are past, and the claims of the Klebs-Loeffler bacillus are established. The question has been decided, and the presence of the Klebs-Loeffler bacillus is demonstrated in primary pseudomembranous laryngitis almost without exception.

A careful investigation of the management of diphtheria patients, and a study of the development of new cases from day to day leads to the conclusion that the great mortality can be reduced one-half by early treatment. The great importance of more care in recognizing the causes and enforcing the means of preventing diphtheria are obvious. The causes of the rise and fall in the number of cases in our city require careful scientific study. Local atmospheric conditions, prevailing winds, seasons of the year, personal hygiene, sunlight, overcrowding houses and schools, conditions of cellars, sewers, unpaved streets, drainage of vaults and ventila-

tion are among the factors. A disease which shows in this city 1009 new cases reported in 1896 with 260 deaths, a mortality of 25.76 per cent, demands the use of every prophylactic measure known to science. Municipal attention in the care and control of smallpox is immediate in the outbreak of any epidemic, but diphtheria with a mortality of 25 to 35 per cent., 90 per cent. of whom are under 9 years of age, receives but passing mention.

The general adoption of a prophylactic dose of antitoxin to every child of croup age, viz.: under 10 years, exposed to diphtheria, is the chief remedy advocated to diminish the mortality. The presence of adenoids and enlarged tonsils would especially indicate the use of this preventive measure.

Intubation and antitoxin are now recognized throughout the world as the best methods of treatment in laryngeal diphtheria. Notwithstanding the efforts of some prominent members of our profession to impair the usefulness of these two life-savers, antitoxin and intubation are here to stay. They no longer need argument in their support. It is only necessary to use them intelligently and the results will speak for themselves. We have no more exact demonstration of the interdependence of medicine and surgery than that shown by statistics of intubation without antitoxin, 70 per cent. mortality; with antitoxin, 30 per cent. mortality.

The marvelous curative influence which antitoxin has in laryngeal diphtheria is now a well-accepted fact. As a specific in primary pseudomembranous invasion of the larynx its claim is well supported. The early use of a full dose is of the greatest importance, and a more general recognition of this fact by the profession and the laity will result in a great diminution in the number of cases of secondary laryngeal invasion, at present 16 per cent., and therefore operative interference will become limited. No case of laryngeal diphtheria should receive less than 1500 units, and children over 2 years should have 2000 units, and an additional dose of 1000 units may be repeated every twelve hours according to symptoms. The more concentrated the serum, the more satisfactory for our use. It would seem that many of the unpleasant effects, such as rash, occurring in 5 to 40 per cent., pain and swelling, were increased with the additional quantity of serum injected.

The reported dangerous effects of antitoxin which made such an impression on the laity have proved to be without foundation. Fatal results are due to the disease, not the antitoxin. The fault lies usually in late administration. Serum showing evidence of general turbidity should not be used. The date of issue from the laboratory is stamped on each package and should be noted, as after six months the antitoxic value diminishes.

Additional medicinal treatment is of great value. The continuous inhalation of alkaline steam acts efficiently in softening laryngeal pseudomembrane, and intubated patients expel secretion more easily when moist and liquefied. The more adherent membranes are not so easily affected. Medicinal vapors from combined solutions of eucalyptus, oil of turpentin and carbolic acid are then more beneficial. Fluids should be given in large quantity, with the same object in view. In younger children who do not expectorate properly, a daily dose of calomel is of great importance. Calomel vaporizations are useful in septic cases, and the bichlorid given every hour in doses of 1/60 grain has many enthusiastic supporters. Iron is useless in the acute stage of the purely laryngeal form. Strychnin and alcohol are given in all cases where a respiratory or cardiac stimulant is needed. Nasal or nasopharyngeal exudates should receive appropriate local treatment.

After the differential diagnosis is made the indications for operation are dependent on many factors which experience only can fully impress upon us. One fatal mistake in judgment in an effort to avoid too early operation will bring one to a full realization of his responsibility. The points for consideration are: 1. Stage of disease. 2. Age of child. 3. Intelligence of parents. 4. Surroundings. 5. Trained nurse. 6. Amount of antitoxin and time when administered. 7. Distance of patient from operator. 8. Amount and character of dyspnea. 9. Complications. Operation in laryngeal diphtheria should not be refused because it is too late. Many can be saved at the last hour, but the mortality rate is necessarily high. Judgment, discrimination and experience show that early surgical interference does the patient no injury. A small frequent pulse, cyanosis, aphonia, marked retraction of chest wall and epigastrium are urgent indications. Mechanical relief is so sure and painless that it seems little short of criminal to allow a child to suffer and struggle for want of it. Where the two methods of surgical interference are possible intubation should always be the primary operation.

The technique of intubation is most minutely described in our various text-books. Particular attention should be paid to the position of the child and the selection of the tube. Ill-fitting tubes injure the larynx. The operation should not be attempted without previous practice on the cadaver. If not skilfully performed the child's life is endangered, or the larynx and surrounding tissue wounded, and the operation brought into serious disrepute. It is remarkable how intubated patients recover with little or no care. Many of these little ones, among the pauper and ignorant classes where this disease thrives, will be found playing around the room on the second day, the tube still in place. Careful directions as to rest, feeding and medication were entirely unheeded.

The Casselberry method of feeding is especially useful for children under 4 years of age, and the catheter method, body horizontal, face down, is more successful with older children. In none of my cases has it been necessary to resort to lavage or nasal feeding. The former argument of difficulty in feeding can be relegated to pre-antitoxin days. Instruction by the attending physician, and the selection of a proper method for each patient is all that is necessary. In many cases practically no medication except antitoxin was given and any tendency to membrane extension was met by an additional dose of serum.

The extraction of the tube is the most difficult part of the operation, and should be performed whenever an intubated child suffers from returning dyspnea. Food or membrane may have obstructed the tube, or the tube may have been swallowed.

The prolonged use of a tube may be required. In four cases reintubation was necessary after extracting the tube at the termination of four days. An additional forty-eight hours was sufficient to permanently relieve two of these patients. The remaining two proved very interesting and illustrate some of the difficulties the operator encounters.

CASE 1.—A girl, aged 1 year and 9 months, a patient of Dr. G. H. Sherman, gave the usual history of a descending type of laryngeal diphtheria with the primary exudate on the tonsils. Dyspnea and cyanosis were

severe and intubation was performed with immediate relief. One thousands units of antitoxin were administered. The tube was removed on the fourth day, dyspnea returning in a few hours, and reinserted six hours after extraction. It was again removed two days later and dyspnea did not return until four days after the second extraction, when intubation was again urgent, a piece of membrane being loosened as the tube was inserted. One thousand five hundred units of antitoxin were given and, although the tube was coughed out twice during the next four days, on extraction the breathing was good and the patient recovered. The conclusions from this case, confirmed by later experience, show that if the tube can not be removed at the end of four days an additional 1500 units of antitoxin should be given. The retained tube was evidently necessary on account of persisting membrane, showing the original dose of 1000 units insufficient for this case. The tube was worn ten days.

CASE 2.—A girl, aged 2 years and 9 months, was seen with Dr. Rodd, Feb. 2, 1897. A glance at the child was sufficient to show that the marked cyanosis and comatose condition promised a speedily fatal termination. A three-year tube was quickly prepared and, with only a nervous woman as assistant, and no one to hold the head, an attempt was made to pass the tube, but the faulty position and large size of the tube made two efforts unsuccessful, and it was at once apparent that one more failure was certain to prove fatal. I exchanged the three-year tube for the one-year size, and at this juncture Dr. Rodd arrived. Our next effort was successful and no more inspiring or delightful sight can greet the eyes of the surgeon than this picture of returning life to the asphyxiated child. An hour later the one-year tube was coughed out, and a two-year replaced it. The case progressed favorably but reintubation was necessary on the fourth, sixth, eighth and tenth days. A loose piece of membrane was removed at one of these operations and 1000 units more given. The tube was finally removed on the seventeenth day, twelve intubations having been performed.

A case which illustrates the possibility of saving life when the patients are moribund was seen with Dr. Geo. Bassett, May 25, 1897. A boy, aged 3 years and 5 months, had been ill with diphtheria involving the tonsils, pillars and larynx for some days and no physician in attendance. On entering the room it seemed that death was a question of only a few minutes. There was no radial pulse and the child was completely comatose. It luckily happened that a three-year tube prepared for another patient was ready for use, and as the tissues were completely relaxed it was quickly passed without disturbing the position of the child on the bed, and artificial respiration resorted to. The tube gave perfect relief and the patient was sent to the hospital for treatment, 1500 units of antitoxin having been given. On the fourth day the tube was extracted, but dyspnea returning next day a second operation was performed and 1000 units administered. He coughed out the tube 2½ days later, and was discharged from the hospital fully recovered fifteen days after admission.

From a study of these cases and general observations in the treatment of diphtheria, we can formulate a series of definite conclusions and rules of procedure which apply to all cases of laryngeal diphtheria.

1. Administer antitoxin early without waiting for a bacteriologic diagnosis.

2. Tonsillar exudate attended by a croupy cough or partial aphonia is an indication for a full dose of 1500-2000 units of antitoxin.

3. Antitoxin administered twelve hours or more prior to operative interference will reduce the mortality of intubated cases at least 50 per cent.

4. Immunize all exposed children of croup age.

5. Continuous steam inhalations are of great value in all cases.

6. Early operation is most strongly advocated.

SUMMARY OF ONE HUNDRED CASES.

Number of operations, 100; recoveries, 69; deaths, 31; mortality under 3 years, 49 per cent.; mortality over 3 years, 19 per cent.; complicating measles, 8 cases, 5 deaths.

Age of patients operated on: 1 to 2 years, 16, of whom 9 recovered, 56.25 per cent.; 2 to 3 years, 23, with 11 recoveries, 47 per cent.; 3 to 4 years, 20, of whom 16 recovered, 80 per cent.; 4 to 5 years, 15, of whom 12 recovered, 80 per cent.; 5 to 6 years, 11 cases, with 10 recoveries, 90.9 per cent.; 6 to 8 years, 10, of whom 7 recovered, 70 per cent.; 8 to 12 years, 5, of whom 4 recovered, 80 per cent.; number of doses of antitoxin, 160.

Eighty-five per cent. of the cases occurred on streets that were not paved.

USE OF OPIUM IN INFANCY, SEEN IN ADULT LIFE.*

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The danger of opium as a remedy in infancy has only recently been recognized. Many physicians give the drug or its alkaloids without the slightest recognition of its possible injurious effects on the organism in the future. In a recent text-book, a statement is made that the action of opium is transient in infancy, and without danger except in large doses. The prominence of certain proprietary drugs, as soothing syrups for children, and the characteristic effects of opium, with the great injuries noted later, have brought out facts of the damage from these sources.

In current literature little notice is taken of this danger, and yet a great variety of facts are constantly appearing, pointing out the disease and degeneration clearly traceable to this cause. In all probability the largest use of opium in infancy comes from its domestic application. The various tinctures and infusions are household remedies and, in many sections, the gum from the poppy is gathered and put away regularly as a household necessity. It is the most convenient and practical of all remedies in the obscure disturbances of childhood. No doubt, some physicians find it very useful and often give it thoughtlessly. The drug store files show how commonly it is used in infantile therapeutics, and often it is given in a routine way for a long time, particularly for neurotic and intestinal disorders.

My purpose is to call renewed attention to this danger, and show some new facts from the clinical side, that are not uncommon and, no doubt, can be confirmed in the practice of many physicians.

In adult life, opium and its alkaloids, in a general way, are marked excitants or depressants. Either one or the other is most prominent, and both always are in the same person. This is not dependent on the doses, although that is marked in many cases. One will have a long, early stage of stimulation and wakefulness, and

*Presented to the Section on Physiology and Dietetics, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

then depression and sleep. The other will have only slight exhilaration, and rapid marked sedation. In one case recovery from its narcotic action is followed by malaise and much physical discomfort; in the other, rest and a degree of satisfaction resembling that which follows natural sleep. The psychic effects vary: In one, most pleasing mental quietness and satisfaction follow; in the other, unusual buoyancy followed by total oblivion and discomfort and recovery. In the former, the mind falsely reasons that some new, exalted mental condition has been attained, most desirable for the future. In the latter, the discomfort from reaction calls for relief in the removal of the drug. Both classes soon have a reactionary period of discomfort and nerve disturbance. These are general states to which there are almost infinite exceptions and variations. While the sedation from opium falls most markedly on the sensory centers, and nerves of sensation, its localized action on the psychic and organic functions varies widely. In one case profound alterations of the functions appear, and rapidly extend to the mental operations. The organism, after a period of sharp irritation, apparent in nausea and deranged digestion, seems to take on a certain immunity and toleration, or the organism appropriates opium as it does food, and a demand for its continuous use becomes more and more imperative. This is the state of the habitués, and is the result of a long use of it, or appears in some cases at the beginning of its use. It is evident that some unknown states of the organism are more susceptible to its physiologic action than others. It is a common observation that coarse, low organic natures, or imperfectly developed minds and bodies are less susceptible to the sedative effects of opium than high-grade, finely developed, nervous persons. In practice, opium as a medicine varies in its effects very largely from these conditions—the finer the organism, the more pronounced the effects and the smaller the dose required; the coarser the organism, other things being equal, the larger the dose to get its physiologic action. These general facts, with others, are the same in infancy as in adults, only less observed. The child who is given laudanum for some condition, and appears better, has had the pain distress-signals covered up, and at what sacrifice, or organic changes which follow, no one can tell. At all events, the same exhilaration and depression occur as seen in the adult. The former may not be noticed and the latter only seen, but the same conditions follow. In the infant the small power of resistance and the extreme susceptibility to physiologic influence from narcotics is not overcome by dosage. The physiologic action of ½ gr. of opium on an adult, and in 1/40 gr. on an infant is the same in degree, only in one case there is little or no resisting power. The infant has an unknown and undeveloped organism. The adult is, in some degree, known, and certain physiologic effects may be confidently expected. It is not a single dose or several doses given for certain disorders, although this is often marked in many ways, but it is the long-continued use that is followed by certain degenerations.

Opium given in convulsions, with other drugs, and in intestinal troubles, and for insomnia, nervous irritation and unknown conditions, with apparent good results in temporary relief, is dangerous if continued any length of time.

Opium and its alkaloids seem to have two distinct effects on the nerve-centers and organism of infancy. Its sedative action is of the nature of palsy. Cell functions and growths are slowed up, retarded and finally changed. The changes following long-continued doses become permanent. The symptoms of dulness and stupor continue in lessened vigor and degrees of imbecility and mental perversion in later life. The freedom from pain and forced sleep with apparent steadiness of nerve force react in increased irritation and instability, with greater sensitiveness to all surroundings.

Nearly all persons who have been injured in infancy and early childhood from these drugs manifest these two characteristics. Increased dulness and stupor, or nervous irritation and instability, often both, may be combined in one. Beyond these are disorders of the nervous system and digestion, with low power of control and subject to morbid impulses that are largely uncontrollable. These various manifestations are better studied in the history of cases, the following of which are illustrations.

In a family of four children, whose parents were strong, healthy persons, living on a farm, one, a boy, was dull, passionate and of a low grade of intellect. He would overeat and drink to excess, water, tea, coffee, or anything he fancied. He was stupid and obstinate, and at times, excessively sensitive and irritable. No one in the family resembled him in any way, but all were healthy and vigorous in mind and body. When 1 year old he had a convulsion and was given opium daily for over a year. Then at long intervals, finally, it was abandoned, and it has not been used since. The parents noticed it was affecting him at the time, changing his mind and habits, and would not permit its use again. This was clearly an example of retarded brain growth with perversion of the functions, and later it will, no doubt, develop into some drug addiction or low form of dementia, disease and death. The history pointed to its use as the most prominent cause of this condition.

In a similarly healthy family, one son became an impulsive inebriate at 18 years of age. The others in the same surroundings and conditions of living are very temperate and well. During the infancy of this boy he was given morphia for intestinal disturbances. At one time it was taken for nearly a year, by advice of the physician. He was stupid and dull much of the time this was taken, and its use was continued as a medicine for years, at long intervals, and in one or two doses a day. He began to use spirits to excess soon after puberty, and is now a periodic inebriate. The clinical study indicated a degree of mental and physical perversion and degeneration, dating from the use of morphia in infancy. A case which came under my observation was that of two children of a distinguished missionary, one, a young woman, who at 24 years of age suddenly began to use opium and spirits to excess and showed much mental disturbance. During infancy she was nursed by a Hindoo woman, and was noted for her stupor and tendency to sleep. In early and later childhood she was extremely nervous and suffered from many hysterical affections. She was an accomplished teacher and a woman of great pride of character and ambition. Her brother, born two years later, was nursed by the same woman, and was noted for his somnolence and general stupor during this time. Later it was found that the nurse was an opium-taker, and that both children had been under the influence of opium from nursing. The boy grew up extremely nervous and irritable. At one time he drank beer to excess, then was a gambler. He was changeable and notional, became a clergyman; then a physician, and finally a speculator. He is now an opium-taker and neurasthenic, and invalid, although not 30 years of age. Two other children of this family, one born before this Hindoo woman became a nurse, and the other after she was discharged, are strong and healthy

and free from any peculiarities of mind or body. The elimination of all other cases leaves the poison of opium the specific central factor in these cases. In my studies of the heredity of all alcoholic and opium inebriety, about 10 per cent. give some history of drugging in infancy. Paregoric and laudanum are the most common. Narcotism from opium by accident has been followed by defects which finally culminated in drug or spirit-taking. A boy, 2 years old, ate a large number of opium and candy lozenges and was narcotized for two days, and with difficulty prevented from dying. He grew up an erratic, unstable, and feeble child. Digestion was impaired and sleep broken, and finally, at 21, he became a spirit-taker and inebriate. Two brothers were healthy and strong. This was probably the result of narcotism. In cases of defective parentage, where nervous degeneration and unsoundness exist, the use of opium in infancy will intensify these states, and make them more pronounced. In children from drug-poisoned families, such as inebriates or those who, from nutritional disorders are suffering from autointoxication, opium may prove a most seductive drug for a time, but in the end be followed by more serious evils. Children of brain-exhausted, worn-out parents are often found to enjoy the effects of opium, and receive great apparent benefits from its use. Later they easily become drug-takers, and are the most incurable. Neurotic infants and children are, no doubt, very susceptible to these drugs, and the physiologic impression is so pronounced as to suggest organic changes.

A few instances are on record of hydrocephalus following the use of opium in children, suggesting serum in the ventricles, ending usually in exhaustion, coma and death. Many parents manifest an unreasoning therapeutic credulity in drugs in infancy, which physicians cultivate and sometimes heartily believe in. In such a case a very strong medical man continued an opium prescription for over a year, and the child grew up feeble-minded and is now an invalid. The next child in the same family is a hearty, vigorous man. He was not treated for any length of time during childhood by drugs. The use of laudanum in infancy was traceable in ten cases of epilepsy associated with spirit drinking and petty criminality. As these patients came from the lower classes and had a defective heredity, the influence of opium could not be separated as a specific cause. Undoubtedly, it was a large contributing one. I have gathered many histories which seem to confirm the impression that opium-taking in infancy and childhood is often an exciting cause of a latent hereditary predisposition to the drink mania. At all events, a large proportion of such persons seek relief from alcohol in the physical strain and stress of life, then take opium when the effects of alcohol become prominent.

Opium and its alkaloids, given to healthy children occasionally for some special purpose, are in all probability without injurious effects. In unhealthy, neurotic children, with defective ancestors, and evident imperfect development, the increased degeneration which follows the use of opium is clearly from this source. Where this drug is combined with other remedies, and given a long time, the effects are the same. They can not be lessened by the action of other drugs. No form of opium should be given to infants or children for more than a day at a time. While the effects of continuous sedation may be overcome by correct living, the cell injury and perversion of function is never repaired. The growth and development of other organs may do much to overcome in part, and cover up the injury, but the defects will appear from the presence of the slightest exciting cause. The following case has recently come to my notice.

Five children of healthy parents became inebriates, both alcoholic and opium, when about 20 years of age. There was no heredity nor any special exciting causes. The home life and example were good, and both parents were total abstainers. Each one seemed to be nervous and feeble, and lacking in vigor, then without any reason began to use alcohol and opium freely, and finally were addicted to its constant use. It was found that from early infancy and through childhood they had been given laudanum and other forms of opium, for all sorts of ills. The mother had treated them without the aid of a doctor, and opium was used continuously for several months at a time. They all suffered from nutritional and digestive disorders, and were all nervous insomniacs and irritable and dull at times. This domestic treatment was, no doubt, the cause of the degeneration and neurosis in manhood. Three of these persons are decidedly feeble-minded. One is a talented musician, the other an actor of some ability. Two use spirits alone; two use alcohol and opium; one uses opium alone. They are of the imbecile grade of inebriates.

Another case reported to me was that of a very highly cultivated woman who, at 34, began to use morphia without any apparent cause in pain or sickness. She was a philanthropist and on the visiting board of a hospital where such cases were treated, and was acquainted with the dangers of the use of the drug. All the possible causes were eliminated in the study and the remarkable fact appeared that opium was used very freely in the first two years of her life. It was with difficulty removed and she was feeble and very nervous until after puberty, when she became strong. Her own statement was that she found such peace and comfort from its effects that she could not abstain from it.

Several persons using alcohol have given, as a reason for this addiction, the fear of becoming opium-inebriates, They have found opium so seductive and pleasing as to be irresistible; with alcohol they felt safe. Opium-taking in infancy is the common history of many cases, and is generally the domestic use of laudanum at first, for disorders of mind and body.

The presence of nervous dyspepsia, which begins soon after puberty and by early or middle manhood becomes a most distressing disease, is often traceable to the free use of opium in infancy and early life. Early and profound exhaustion from slight overwork or excitement, seen in young persons, indicating low vitality and feeble nervous organism, is the result of opium-taking early in life. Early precocity or failure to sustain the expectations created have been noted in the cases of early addiction. The many constitutional defects and degeneracies which appear after puberty and in early manhood should always create an inquiry concerning the early therapeutics and drugs given in childhood. Where soothing syrups and prescriptions for seductive effects have been used a long time, the suspicion is strong that an opium diathesis has been created. I wish to emphasize that the use of opium and its alkaloids in infancy will, in a large proportion of cases, create a diathesis or predisposition to its use in later life. This predisposition is manifest in irritation and exhaustion, wth intense, uncontrollable impulses for relief.

Alcohol, chloroform, chloral and many of the most common narcotics are welcomed and largely used to supply this demand. This opium degeneration may take on sexual and nutrient manias and leave the brain in an infantile condition of vigor and stability. A "Christian

Scientist" who has made some reputation by his delirious theories, was, according to a Boston physician, brought up on opium. His mother was a narcotic, and to protect herself, gave her son opium freely in early life. He grew up undersized, and with a highly sensitive brain, full of delusive dreams and fantasies. This was another form of opium diathesis.

The second fact that I would note is that opium in infancy acting on the most unstable organism, the brain cells and centers, not only retards but prevents healthy physiologic growth. In defective heredity this is permanent, although it may be concealed until later in life. This physiologic action of exaltation and depression, the latter being the principal stage, is manifestly toxic and injurious from the functional derangement which follows. Where no disturbance is recognized, the real danger is concealed. The cell growth and functions suffer, mechanically, nutritionally and psychically, by checking activity, diminishing nutrition and changing direction and purpose of action. This is true of opium in all cases. Sometimes one effect is more prominent than others. In DeQuincy the psychic action was prominent. In some cases the anemia shows in the disturbance of nutrition, and in others the depression and suppression of organic activity is apparent.

The third fact to be remembered is the concealed danger from opium-drugging in infancy. If only neurosis is present, if defects of growth and function exist, opium will of necessity increase this condition. Anemia, exhaustion and perversion of organic activity follow. If some temporary state is present, opium, by covering up the pain-signal is not curative, but may be destructive in many ways not easily recognized until later in life. No one can tell whether this danger begins with the first dose or only after a succession of doses.

Lastly, the magnitude of this danger is not recognized as it will be in the future. Neurotic disturbances, obscure and open, and toxic diseases of many forms, have an early history of opium drugging. The ignorant mother who uses soothing syrups freely, to suppress the irritation of the infant, is not the only offender. The routine, and often thoughtless, physician who uses opium freely in infantile prescriptions is responsible in many ways for the wrecks of later life. The toxic cases under my care are striking illustrations of this evil. Inquiry in others brings out this cause with great frequency. While it is difficult to narrow down the etiology to this one factor, it is clear that the danger from this source has been and is a potent and wide-spread cause. We need more clinical researches and clinical studies in this direction.

THE BUBONIC PLAGUE IN SAN FRANCISCO.*

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We have always regarded the plague as something very distant and impossible, and have read of its ravages in India and China with much the same feeling of composure and security that we read about an uprising of the natives in Madagascar. Or perhaps we have considered it as a matter of historic interest on account of the fearful epidemics which in pre-sanitary days used to sweep over Europe, devastating countries and hardly leaving enough people behind to keep up the archives and records of the state. Even now that it is among us, and in America for the first time, there seems to be a tendency to underrate its importance and dismiss it without a thought, as a scare designed for base political motives.

While I do not believe in becoming unduly excited about it, or in publishing far and wide that there is plague in San Francisco, I do not think that we should try to deny among ourselves the very existence of it, but should accept the situation as it is and do our best to stamp it out while it is still within our power. It would be folly to ignore its presence and allow it to increase to such an extent that the national government would be compelled to step in and take from our hands the work of fighting it and perhaps quarantine the whole city with U. S. troops, thus advertising to the world that San Francisco was not only financially negligent in the face of an epidemic of a disease which is guarded against by the U. S. Marine-Hospital Service with more watchfulness and dread than any other.

San Francisco should look at the history of Oporto, and profit by her experience. The bacteriologist who announced the first case, in January, 1899, narrowly escaped being mobbed. The health authorities were hampered by the merchants and the press, who harped on the injury to trade caused by the announcement of the existence of plague which the laymen, in their infinite wisdom, declared did not exist. The health authorities were refused assistance until finally so many cases appeared that the government stepped in, surrounded the city with a cordon of soldiers, absolutely stopping all travel and business, and it was only after the lapse of one year, and after the experience of a partial famine, that the city was released and declared no longer infected. In the meantime its citizens had parted with the small sum of $7,000,000, a good deal of money, but the probability is that by that time, even the omnipotent and scientifically wise press had arrived at the conclusion that their lives were more valuable than their business.

Just how the disease was introduced into this country is a mystery, as the first case discovered was in a Chinaman who had been in Chinatown sixteen years. The probability is that he was not the first, and this theory is strengthened by the fact that there had been an increased mortality in that district during the months of January and February. During those months there were 97 deaths reported from the Mongolian quarter, and of these 20 were ascribed to lobar pneumonia, 5 to bronchopneumonia, 4 to typhoid fever, and 7 to acute miliary tuberculosis. Now all of these diseases, in the beginning of an epidemic of plague, should be regarded with suspicion, and examined bacteriologically, for they are simulated very closely by the pest.

The assistant city physician, whose duty it is to inspect all dead Chinese who have died without attendance by a regular physician, is at a great disadvantage in arriving at the cause of death. He simply sees the body after death, and by questioning the relatives or undertaker, who are ignorant and use very broken English, he makes a guess at the cause of death, taking into account the appearance of the body. According to the Caucasian statistics of San Francisco, the number of deaths from pneumonia, typhoid, and miliary tuberculosis, to every 97 deaths, would be 12.3, whereas the assistant city physician, with the means at his command, has been forced to consider that there were 36 of these cases out of a total of 97 deaths for the two months. Since the plague can readily be mistaken for these diseases, we are justified in the suspicion that some of these cases were plague. Nor is the fact that we have not now a wide-

*Read before the San Francisco County Medical Society.

spread epidemic proof to the contrary, for it has been the history in other parts of the world that the plague gets a foothold very slowly and insidiously. There is a first case, and then it may be a couple of weeks before the second, and they may appear occasionally and at intervals of several days or weeks, until the houses and the quarter become infected, and then the real epidemic breaks out, and hundreds of cases occur. I will commence the account of the recent occurrences by history of the first case as supplied by the Chinese Consul. We have found that the only way we can get histories of these cases is by turning them over to the police department, and by means known to the detectives they find out a few items.

CASE 1.—Wing Chuc Ging, aged 41, in Chinatown sixteen years, died March 6, 1900, in the basement of 1001 Dupont Street. He worked in a woodyard on Pacific Street, and stated to Wing Ging, his brother, that he had been sick for six months. On February 7 he called at the office of Dr. Chung Bu Bing, 309 Dupont Street, complaining of headache, tired feeling, pain in the head, back and chest and fever. The symptoms and pain in urinating had been present in the bladder for two or three days. A diagnosis of inflammation of the bladder was made and medicine given for this. On February 14, the patient consulted Dr. Wong Wo, 766 Clay Street, and told him he had contracted gonorrhea. He had no fever and no pain except in the genitals, complained of a lump in the right groin and was somewhat lame on that side. He also stated that he had a urethral discharge, but would not allow a special examination. He was given some medicine to relieve the difficult and painful urination, and a plaster to apply to the lump. No surgery was instituted and no further medical treatment. He was in bed two weeks, but would not tell his brother of his trouble. A few days before he took some Chinese medicine which he obtained from Dr. Wong Wo. This caused vomiting, profuse diarrhea, and collapse, followed by death.

From the history this was evidently an ambulant case, in which an exacerbation occurred, marked by the vomiting, diarrhea, and collapse ending in death. I saw this patient with Dr. Wilson, in the basement of the Globe Hotel, on March 6. I observed that there was a swelling of the inguinal lymphatic glands on the right side. There was no suppuration and the skin was unbroken. The glands about the saphenous opening were enlarged, and in this situation there was an open sore, which was dried and partially healed over. As a mere matter of routine I removed some of the glandular tissue, not expecting to find anything in it. No autopsy was performed. Smear preparations from the interior of the gland showed large numbers of a small short bacillus resembling the bacillus of bubonic plague. Isolation of the organism was commenced by culture methods. The next day a rat, guinea-pig and monkey were inoculated with an emulsion made from the gland removed from the Chinaman. The following is the account of the results obtained:

(The municipal laboratory being short of animals, and short of funds, and as it was deemed unsafe to conduct experiments with plague inside the city limits, the invitation of Dr. Kinyoun to use his laboratory was accepted and the inoculation experiments detailed below were performed in the Government Laboratory at Angel Island, by Dr. Kinyoun of the U. S. Marine-Hospital Service, asisted by Dr. Agnes Walker and myself.)

March 7, 1900, 2 guinea-pigs—each 700 grams—1 half-grown white rat, and 1 monkey, were inoculated with an emulsion made from a piece of glandular tissue removed from the body of Wing Chuc Ging on March 6, 1900. The animals were placed in appropriate cages, protected in the usual manner. Cover-slip preparations were made from the glandular tissue, in which were found a number of micro-organisms, suspiciously like the bacillus of plague both as to their morphology and staining. Cultures were made from a portion of the tissue. March 8, the animals were in good health. March 9 and 10, there was no change and the animals ate well. March 11, one guinea-pig was found dead at 8:30 A.M., the other quite sick, the white rat dying, the monkey dull, listless, and would not eat; at 11 a.m., both the rat and sick guinea-pig were dead.

Post-mortem examination of guinea-pig No. 1.—On section there was an extensive edematous area on the left side extending from the axilla to the groin, the center of which contained a large quantity of exudate. The tissues about the site of inoculation were necrosed. The inguinal glands were considerably enlarged and reddened. Cover-slip preparations made from the exudate, at the point of inoculation, showed almost a pure culture of a short bacillus with a tendency to bipolar staining. The groupings of these organisms was quite characteristic. The peritoneal cavity contained a small quantity of bloody serum. The spleen was enormously enlarged, fully three times its normal size; the surface was very much reddened and covered with small yellowish dots; the spleen was also very friable. Cover-slip preparations made from the spleen showed an enormous number of a short diplobacillus, quite rounded, with a marked tendency to bipolar staining. The liver was enlarged and contained several yellow spots similar to those observed on the spleen. The mesenteric glands were not appreciably enlarged. The pericardium contained a considerable quantity of pale, straw-colored serum. The heart's blood was fluid and contained large numbers of the same organism as that found in the spleen, and at the point of inoculation. The lungs showed no evidence of change. The pleura contained about 3 c.c. of bloody serum. Cultivations on agar and in bouillon tubes were made from the spleen and heart's blood.

Post-mortem examination of guinea-pig No. 2.—The body was well nourished. On section the whole left side of the abdominal wall was in a state of coagulation necrosis, more intense at the point of inoculation, and extending from the axilla to the groin. The axillary and inguinal glands were much enlarged and reddened. A small hemorrhage was noticed in the inguinal region. The peritoneal cavity contained a small quantity of bloody serum. The spleen was very much enlarged, fully as much as that observed in guinea-pig No. 1; it, however, did not contain the yellow spots. The liver was engorged and contained several yellow spots on its anterior surface. Cover-slip preparations made from the spleen showed the same short bacillus, with rounded ends, presenting the same poles as those found in the first pig. The pericardium contained a considerable quantity of bloody serum. The heart's blood was fluid, and contained great numbers of the same short bacillus, which took the characteristic stain. The lungs were to all appearances normal. The pleural cavity contained a small quantity of bloody serum. A cultivation on sugar and in bouillon was made from the spleen and heart's blood.

Post-mortem examination of white rat.—Dead about two hours. At the point of inoculation there was a small area of coagulation necrosis, surrounded by a considerable area of edema. The peritoneal cavity was dry. The spleen was enlarged to about four times its natural size, very dark in color, and friable. Cover-slip preparations made of splenic pulp and stained with aniline colors, particularly thionin, demonstrated enormous numbers of a short bacillus with rounded ends, staining more deeply at the poles. The heart's blood contained the same organism in large numbers.

Post-mortem examination of monkey (March 13).—It had been dead about six or eight hours, having been inoculated on March 7, with an emulsion made from a piece of glandular tissue removed from the groin of the dead Chinaman, and having died on the morning of the 13th, after showing signs of illness for two days. At the point of inoculation, which was in the left breast, there was considerable coagulation necrosis. Subcutaneous edema was well marked, especially on the left side over the abdomen. The axillary lymphatic glands on the left

side were enormously enlarged, forming a mass as large as a walnut. There was no enlargement on the opposite side. On section the gland showed congestion and hemorrhages into the gland substance. Cover-slip preparations were made from the interior of the gland and stained with thionin. They showed the presence, in large numbers, of a short coccobacillus, with rounded ends, staining more deeply at the poles. The spleen was greaty enlarged, dark and friable and contained the same organism in enormous numbers. The pericardium contained a considerable amount of turbid fluid. The heart's blood was fluid and contained great numbers of the organism described above. The lungs showed the presence of a well marked pneumonia.

The organism which was present in pure culture in the lymphatic gland of the Chinaman and which was the cause of death of these animals I have obtained in pure culture from all these sources, first from the gland of the Chinaman, and from the heart's blood and spleen of the inoculated animals. I found that it had the following characteristics and have compared it with a culture from Bombay isolated by Pozzi.

Bacillus Pestis, San Francisco.—A small, short, thick bacillus, with rounded ends, frequently occurring in pairs, and in agar and bouillon cultures in short chains. They are nonmotile and no spore formation was observed. Colonies on agar plates, in seventy-two hours at 35 C., were .5 to 1 mm. in diameter, round, semitranslucent, with a bluish or opalescent tinge. The surface is rounded, smooth and moist looking, and the consistency in older cultures tough and stringy. The bacillus was a facultative anaerobe and did not liquify gelatin, and was pathogenic to white rats. It stains readily with the aniline dyes, frequently taking the stain more deeply at the ends, the so-called pole staining. This peculiarity was more marked with the carbol fuchsin, but thionin seemed to give the most satisfactory results. In old cultures there were many swollen and rounded forms, which showed the bipolar staining in an exaggerated manner, causing them to almost have the appearance of little circles and crescents. It deodorized by Gram's method. Bouillon was not clouded, and a film formed on the surface, and settled downward in a fine cloud when the tube was jarred. Bouillon cultures answered to Widal's test with Yersin's serum in a most typical and satisfactory manner.

In addition to the above-described case, I have assisted Dr. Wilson in the post-mortem examination of three other Chinese, two of whom I feel positive were plague cases, but I have been unable to prove this for the following reasons:

The cases were in such an advanced state of decomposition when I saw them that there were many organisms present in the blood and organs in addition to one which resembled the bacillus pestis. The animals which were inoculated from the tissues of these cases all died, but of a mixed infection. I succeeded in obtaining a tube of nearly a pure culture of what was morphologically the bacillus pestis from Case 3, and a rat was given the entire tube at one dose, with the result that it died in thirty-six hours. The post-mortem did not show sufficient bacilli in the organs to clinch the diagnosis of plague. My theory is that there were enough toxins present in the culture to kill the rat before the organism had time to multiply in its body. A guinea-pig was inoculated from this rat, but it died of pneumococcus infection, the plague organism having totally disappeared in the passage through the bodies of the two animals. As I have no more material nor cultures from this case I will never be able to prove it was plague, by inoculation experiments, although the post-mortem appearances and the presence of the organism in the blood would ordinarily be considered sufficient evidence. The results obtained in the other two cases were practically the same as in the one just described.

I am of the opinion that the thorough disinfection and cleaning up of the Mongolian quarter, which the San Francisco Board of Health has been carrying out with considerable vigor, has been of invaluable service in checking the spread of the disease before it had fairly gained a foothold. Vigilance should not yet be relaxed in the least, for it would not be surprising if other cases were discovered in the near future. In such event the measures taken will have to be most radical, for the reappearance of the pest will be evidence that a focus of infection has been established which nothing short of fire will obliterate.

VESICORECTAL ANASTOMOSIS.

WITH SPECIAL REFERENCE TO THE TREATMENT OF EXSTROPHY OF THE BLADDER.

BY JACOB FRANK, M.D.

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CHICAGO.

(Concluded from page 1178).

EXPERIMENT 4.—A male pug cur, weight 22 pounds, was operated on May 6, 1899, and killed May 21. At the post-mortem the abdominal incision was found firmly united. The omentum was partly adherent around the site of the anastomosis. The bladder was empty and greatly contracted. On opening the bladder no appreciable changes were noticed, and the opening between the bladder and rectum admitted the tip of a finger. The rectal mucosa below and a slight distance above the fistulous opening was reddened, probably by the urine. Both kidneys looked bluish, not enlarged, nor thickened; the capsule stripped easily and was not thickened. On cut section the pelvis was found undilated, perfectly smooth and to all appearances normal. The proportion of cortex to medulla was normal. All other organs were found to be perfectly healthy.

Bacteriologic Examination.—A blood-serum and a glycerin-agar tube were inoculated from the pelvis of each kidney. Of these four culture-media, three remained permanently sterile. One blood-serum tube on the third day showed a moist, shiny, whitish growth which liquefied the culture-soil. The growth consisted of very small bacilli, the character of which was not studied any further. They were not colon bacilli, and their appearance was probably due to contamination. At the site where the anastomosis was made the tissue appeared perfectly smooth and normal. No redness nor swelling was noticeable to the naked eye. Microscopic sections made from this part included both the bladder and rectum.

Microscopic Examination. (Figs. 5 and 6.)—In the rectum the following conditions were noted: The intestinal and bladder walls were completely united, and blended in such a manner that the two tissues formed an acute angle of about 80 degrees, which projected into the bladder. The intestinal surface was lined by mucous membrane, the bladder surface by stratified epithelium. Both these tissues presented a normal appearance. They did not come completely together. On one side the intestinal mucous membrane was thinned out; on the other, layers of epithelial cells lining the bladder were gradually reduced to a single layer. It appeared as if from here the epithelial cells were in the act of growing over to reach the rectal mucous membrane, although a small strip of tissue had not yet been covered by epithelial cells. Here connective tissue laid free to the surface. This tissue consisted of cells of an embryonal type and of fibroblasts. The union between the bladder and rectal walls was complete throughout its entire thickness. One could not distinguish—at the line of the union—what was originally bladder and what was intestinal tissue. The mucous membrane of the rectum, and the epithelial lining of the bladder entirely disappeared at the line of

union. Still, one could see the lymphoid tissue of the rectum at the site of the union, although the lymph follicles varied from the normal in that they showed a diffuse infiltration of polymorphonuclear leucocytes. So numerous were the latter that they predominated over the cells of a lymphoid character.

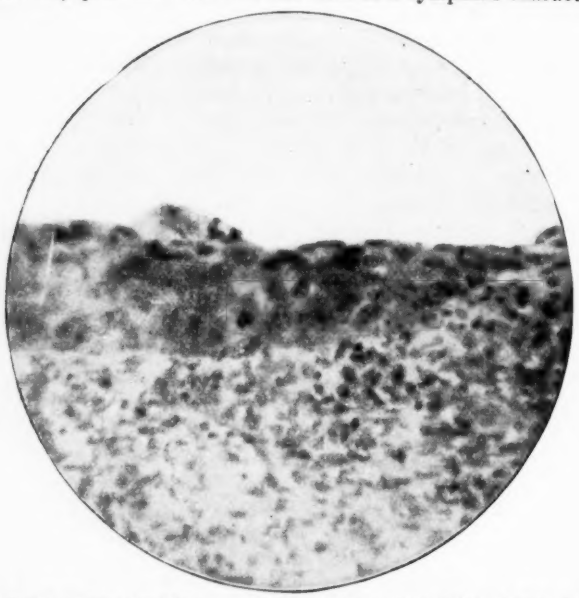

Fig. 5.—From dog No. 4, operated on May 6, 1899; killed May 21, 1899. Section of anastomosis (high magnification). The line of union is to the right, it is not seen in the photomicrograph. The latter shows the vesical epithelium; in it a cell with a karyokinetic figure, indicating a regeneration of the epithelium.

Gram's stain showed, in the tissues of the anastomosis around the line of union, short bacilli with rounded ends, which had kept the stain poorly. These micro-organisms were probably colon bacilli. The examination of the kidney tissue—cortex, medulla and pelvis—showed normal conditions, with no evidence of inflammation or degeneration.

EXPERIMENT 5.—A male dog, weight 30 pounds, was operated on May 11, 1899, killed May 12, and the bladder and rectum removed *en masse*, both ends of the latter tied, as well as the urethra, and water injected into the rectum by means of a syringe. The parts were distended to their maximum without any leakage. The bladder showed a slight redness, although the rectum did not.

EXPERIMENT 6.—A small bitch fox-terrier, weight 15 pounds, operated on May 11, 1899, was killed May 12. The same conditions prevailed as in Experiment 5.

EXPERIMENT 7.—A male black and tan cur, weight 14 pounds, operated on May 16, 1899, died May 20. The post-mortem did not reveal the exact cause of death. The external wound was in good condition, with no peritonitis, and no fluid in the peritoneal cavity. The bladder was empty and contracted and, on opening, showed signs of inflammation. The coupler was still in place and softened. Both kidneys were of the some size and not enlarged, but slightly congested. All other organs were normal except the liver, which was very much congested.

EXPERIMENT 8.—A large Dane bitch, weight 65 pounds, operated on May 18, 1899, died May 21. The autopsy showed the abdominal cavity to be full of a serohemorrhagic effusion which escaped in large quantities. The omentum was engorged with dark blood, and adherent to the abdominal wall at the site of the operative incision as well as to the place of the anastomosis. Peritonitis was absent and all the internal organs, including the bladder, kidney and ureters, were normal.

The macroscopic condition of these does not point to a cause of death in consequence of the operation. The dog had an enlarged thyroid gland, with more or less detached masses growing into the mediastinum, which proved to be a struma colloidea, on microscopic examination. No further microscopic or bacteriologic examinations were made.

EXPERIMENT 9.—A male spaniel, weight 25 pounds, operated on May 21, 1899, died June 9. Several days after the operation a paraphimosis and gangrene of the penis developed. On opening the abdominal cavity, it was found to be empty, with no signs of peritonitis, which was also true of the pelvic cavity. The bladder was contracted and the internal surface somewhat dark red in color. The anastomosis was firm and admitted the tip of the index finger. The bladder surface and rectal mucous membrane about the anastomosis appeared normal. The kidneys were slightly swollen and pale, and the capsules stripped easily. The relation of the cortex to the medulla was normal, and the cortical markings distinct. The pelves were normal, not enlarged and the mucous membrane smooth. They contained no fluid. The ureters were normal and not dilated. All the internal organs were normal excepting the spleen, which was soft and of a dark color.

Microscopic Examination.—Pieces were taken, for microscopic examination, from the cortex and medulla of both kidneys. The latter pieces included the mucous membrane of the pelvis. The tissue of both kidneys was found to be normal and free from inflammatory and degenerative changes except as to one point. In the medullary portion of the right kidney, near the pelvis, two small foci of round-cell infiltration were found. The infiltrating cells consisted of lymphocytes and polynuclear leucocytes. Bacteria could not be demonstrated in these two small inflammatory areas. The possibility that these foci were due to micro-organisms having migrated from the rectum through the ureters into the kidney can probably be excluded. The round-cell infiltration probably owed its origin to hematogenous influences, possibly from some toxins circulating in the blood.

From the results of the post-mortem and the microscopic examinations, it appears that the death of the dog was not due directly or indirectly to the operation, nor was anything found that pointed to an infection of the kidneys from the intestines.

EXPERIMENT 10.—A male fox-terrier pup, operated on May 27, 1899, died May 29. The autopsy revealed the fact that the dog died of a general peritonitis. The abdomen was full of a sanguinous fluid and the omentum engorged with blood. The

Fig. 6.—Dog No. 4, operated on May 6, 1899; killed May 21, 1899. Section of anastomosis (low magnification). The line of anastomosis is shown in the middle of the field, running from above downward. To the left is the vesical, to the right the intestinal tissue.

bladder was contracted and empty, and the mucous membrane, on cut section, showed signs of inflammation. The site of anastomosis was firm and showed no leakage. The coupler was still in place and retained its shape. The right kidney was slightly congested, but not enlarged. The capsule stripped easily and the cortical markings were not well defined. The pelvis contained no fluid and the ureters were not enlarged. A similar condition was found on the left side. There was no microscopic nor bacteriologic examination made.

EXPERIMENT 11.—A large black, male Gordon cur, weight 85 pounds, was operated on May 30, 1899, and killed June 5. The post-mortem showed the external wound suppurating and the abdomen empty. The bladder was contracted and thickened and the mucous membrane of both bladder and rectum appeared reddened on cut section. The site of anastomosis was firmly united and, on distending the bladder and rectum with water, no leakage occurred. Both the kidneys and ureters appeared normal, with the exception that the vessels of the capsule were slightly congested. No further examination was made.

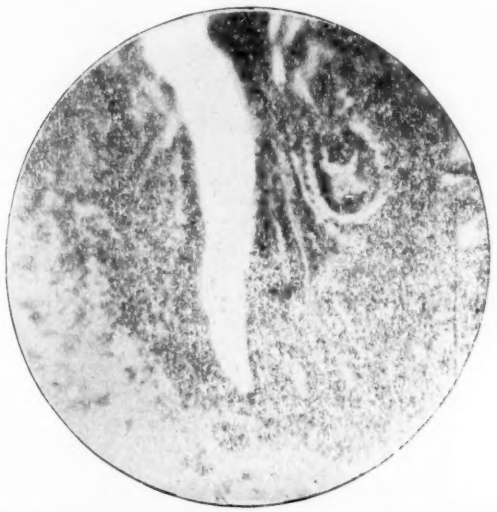

Fig. 7.—Dog No. 13, operated on June 1, 1899; killed June 28, 1899. Section of anastomosis (high magnification). On the left of the field the vesical tissue, on the right side the intestinal mucosa. The columnar epithelium of the intestinal mucosa has grown toward the vesical side and lines to some extent the vesical surface.

EXPERIMENT 12.—A male dog, weight 30 pounds, operated on June 1, 1899, was found dead June 3. A post-mortem revealed the abdomen empty, with an absence of peritonitis and the omentum adherent to the line of operative incision. The bladder was thickened, well-contracted and showed signs of inflammation, but it did not extend below the sphincter vesicæ. The mucous membrane was swollen and reddish-brown in color. Under hydraulic pressure there was no leakage at the site of anastomosis. The coupler was still hard and in place. The kidneys were of normal size, but bluish in color, and on stripping off the capsule the surface vessels were found enlarged. On cut section the cortex, as well as the medulla, was of a dark reddish-brown color with the cortical markings ill-defined and the pelves smooth and containing no fluid. The ureters were to all appearances normal. All the other organs were normal excepting the liver, which was greatly congested. A further examination was not conducted.

EXPERIMENT 13.—A bitch, weight 40 pounds, operated on June 1, 1899, was killed June 28. The animal was well nourished, in perfect health, very playful and lively, and killed by chloroform narcosis. Externally the abdomen presented, in the median line, beginning about an inch above the symphysis pubis and extending upward for a distance of about 2½ inches, a healed, smooth, linear cicatrix. On opening the abdomen by a long median incision, the large omentum was found very slightly adherent to the internal surface of the abdominal parieties at the site of the cicatrix. The extent of these adhesions was very small. The omentum showed no signs of inflammation. The abdominal and pelvic cavities did not contain any fluid. The peritoneum was smooth and shining, and showed no redness nor evidence of inflammation. The bladder was well contracted, firmly united to the rectum, and the place of union everywhere covered by an uninterrupted coat of smooth peritoneum. An inspection of the intestines showed them to be normal.

The kidneys were of normal size and appearance, but, like all the internal organs, were congested in consequence of the death by chloroform. The cortex and medulla showed normal relation and appearance. The pelves did not contain any appreciable amount of fluid. The mucous membrane of the pelvis was smooth and pale, and presented no signs of inflammation. The ureters were not enlarged. The internal surface of the bladder, which contained some fecal matter, was thrown into rugæ. In color, this organ was pale pink, and showed no inflammatory changes microscopically. The anastomosis was firm, and admitted the tip of the index finger. The anterior aspect of the ring was lined by bladder tissue, the posterior by rectal mucous membrane, which appeared perfectly normal. Where the tissues from the bladder and the rectum met there was a slight depression which ran along the whole opening. The rectal mucous membrane in the neighborhood of the anastomosis appeared normal. All internal organs, such as the spleen, liver, lungs, heart, etc., were normal.

Anastomosis (Figs. 7 and 8).—The union between the wall of the rectum and that of the bladder was perfect. There was no doubling up of either intestinal or vesical tissue, and the line of union contained very little newly-formed connective—cicatricial—tissue. No evidence of inflammation was found in the line of union. The rectum presented a normal histologic appearance. The internal surface of the bladder, however, showed some marked changes. The lining epithelium at and near the point of union was missing, and the tissue forming the surface had the character of granulation tissue. It consisted of a vascular tissue formed of round cells imbedded in a matrix of fusiform cells and connective-tissue fibers. It appeared, therefore, that the presence of the fecal matter with its numerous bacteria had set up an inflammatory reaction on the internal surface of the bladder. Bacteria, however, were not found in the granulation tissue, nor in the tissue forming the line of union between the bladder and rectum. The following very interesting observation was made at the line of union: In some places the columnar epithelium of the rectal mucous membrane had grown from the rectal tissue over the bladder surface. This covering of the bladder surface by intestinal epithelium was not yet very extensive, but there undoubtedly existed a marked tendency of the intestinal epithelium to grow by extension over the bladder surface and cover it, as in consequence of irritation it had lost its own epithelium. In neither kidney did the pelvis, medulla nor cortex pre-

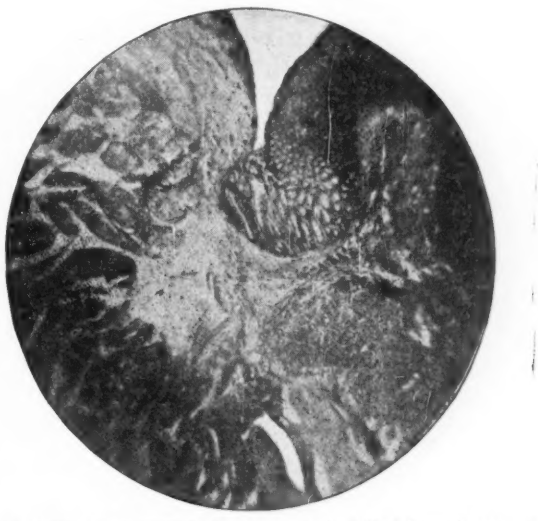

Fig. 8.—Dog No. 13, operated on June 1, 1899; killed June 28, 1899. Section of anastomosis (low magnification). The left side of the field shows the vesical, the right side the intestinal tissue.

sent appreciable histologic changes, and there were no signs of inflammation or degeneration. There were found, however, a few micro-organisms in both organs, as follows: In the right kidney, in tissue near the surface of the pelvis, were bacilli, a few diplococci and some deeply staining round bodies, which looked like either torula saccharomyces or protozoic bodies; in the cortex, a few bacilli in the convoluted tubules and in Bowman's capsules. In the left kidney, in tissue near the surface

of the pelvis were a few bacilli; in the cortex, likewise a few bacilli. These micro-organisms were nowhere found in large numbers, but only seen sparingly here and there.

Bacteriologic Examination.—Two glycerin-agar tubes were inoculated from the pelvis of each kidney. Of each of the two groups one developed a growth, consisting in each instance of a mixture of bacilli—colon as it appeared—and diplococci.

It must be conceded that both kidneys in this case had become infected, but it appeared, moreover, that the infection must have only recently occurred. The number of micro-organisms found in the kidney was not large, and there were not yet present any appreciable histologic changes. The mucous membrane of the bladder, it seems, in consequence of the irritation from the fecal matter, had lost its epithelium, in part at least, and had developed signs of a reactionary inflammation. It is not unreasonable to suppose that the infection which had occurred might have been prevented by regularly washing out the bladder, which, in the case of a dog, can not be well done, but which could be done with a human patient.

EXPERIMENT 14 (Fig. 11).—A black bitch, weight 23 pounds, operated on June 5, 1899, was killed November 22, before the Chicago Medical Society. On opening the abdominal cavity, the peritoneum, including the omentum and all the abdominal structures, appeared normal and free from any inflammatory changes of reaction. The anastomosis between the bladder and rectum was firm and covered by normal peritoneum. Before cepting as to an infection *in situ*, the kidneys were freed and disturbing the relation of the anastomosis any further, exlifted out of their normal position, and inoculations made from the pelvis of each, into glycerin-agar tubes, in the usual way. The kidneys and ureters were normal in color and size, and the substance of the kidneys was also found to be normal on cut section. The bladder was firmly contracted and the mucous membrane of both bladder and rectum looked perfectly normal. The fistulous opening between the bladder and rectum was small, and the tissues forming it corrugated and healthy. The other organs were found normal.

Fig. 9.—From dog No. 15, operated on Jnne 10, 1899; killed September 11, 1899. Section of anastomosis. Spencer prof. ⅛ in.; Leitz. oc. No. 3. The upper part of the field shows the intestinal, the lower part of the field the vesical muscularis.

Bacteriologic Examination.—The four test-tubes inoculated from the pelves of the kidneys were kept in the incubator, at blood temperature for six days, and remained absolutely sterile, no growth of any kind developing.

Histologic Examination.—The tissues of the cortex and medulla of both kidneys were normal. The pelvis of the kidney on either side was lined by normal epithelium and the subepithelial tissue of the pelves showed a moderate amount of round-cell infiltration. The cells forming this infiltration

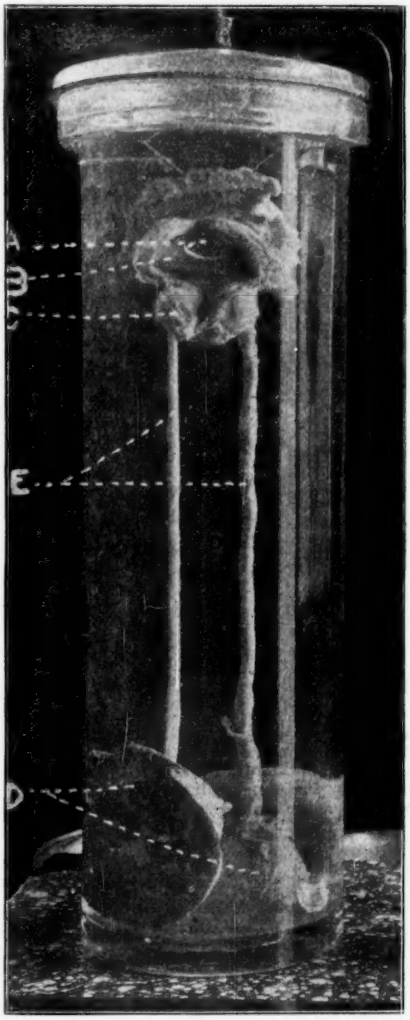

Fig. 10.—Experiment No. 3.—A. Opening between bladder and rectum. B. Bladder. C. Prostate. D. Kidneys. E. Ureters.

were of the type of young connective-tissue cells and lymphocytes. Polynuclear leucocytes were not seen anywhere in the subepithelial tissue. No bacteria of any kind could be demonstrated, either in the pelvis, the medulla or the cortex of either kidney.

From the above results it is safe to say that the kidneys in this dog were free from any infection and, to all appearances, the canine was in perfect health.

EXPERIMENT 15.—A large male, Gordon cur, weight 50 pounds, operated on June 10, 1899, was killed September 11. This dog suffered from the red mange, but otherwise was apparently healthy. The post-mortem showed the external operative wound completely healed, with the exception of a small stich-hole abscess. There were slight adhesions of the omentum at the site of the abdominal incision, and it was also slightly adherent to the left side of the anastomosis, at which place a loop of intestine was likewise fastened by small bands of fibrous tissue. There were no other evidences of peritonitis. The anastomosis was firm and covered by smooth peritoneum with the bladder well contracted. The right kidney and ureter appeared normal in color and size, but the left kidney showed injected vessels and was of a darker color than the right. The left ureter was increased to double the size of the right. All other organs looked normal. Inoculations were made from the pelves of both kidneys and the colon bacillus developed from both groups.

Histologic Examination (Fig. 9).—The subepithelial tissue of the pelves of both kidneys showed granulation tissue densely

infiltrated with round cells. In this were also demonstrable short plump bacilli with rounded ends (colon bacilli) and staphylococci. The kidney substance proper, of the right kidney, did not show any marked changes, but in the interstitial connective tissue there were found a very few bacilli of the

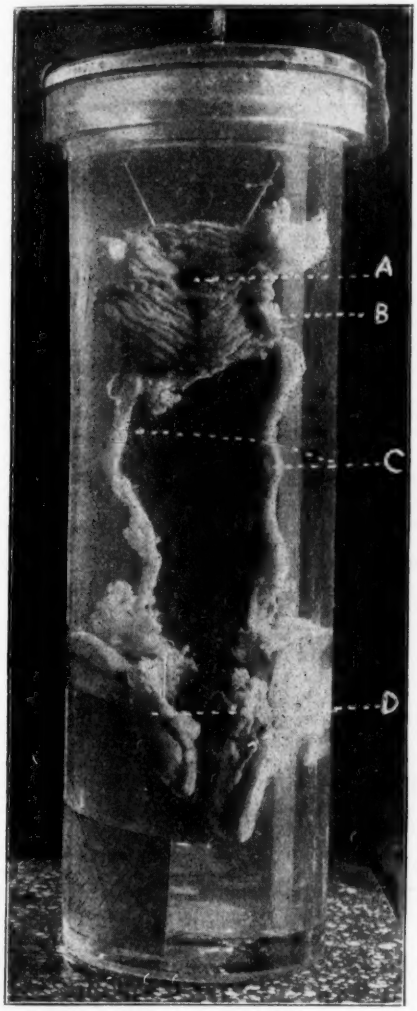

Fig. 11.—Experiment No. 14.—A. Opening between rectum and bladder. B. Rectum. C. Ureters. D. Kidneys.

type described above. The left kidney showed interstitial foci of small round-cell infiltration, and these areas also contained many colon bacilli and a few staphylococci. Numerous bacilli were likewise found in the glomeruli.

The line of union at the site of the anastomosis demonstrated a very intimate blending. There was practically no connective-tissue scar, the muscularis of the rectum and that of the bladder being in the closest apposition. The rectum was covered by normal mucosa with a normal epithelial lining. The internal surface of the bladder was void of epithelium, but there was present granulation tissue containing many young embryonal connective-tissue cells and lymphocytes as well as colon bacilli and a few staphylococci.

The results of this examination unquestionably showed that an infection had occurred of both the bladder wall and kidneys, although the changes in the right kidney were comparatively slight.

CONCLUSIONS.

From the careful histologic and bacteriologic examination which was conducted in a number of the cases operated on, it appears beyond a doubt that vesicorectal anastomosis may be performed on a dog without leading to an infection of the kidneys. In two instances both the histologic and bacteriologic examinations showed a total absence of infection, and one of these cases was that of a dog killed six months after the operation. If the results on dogs, which naturally can not be kept under the best hygienic conditions and where no after-treatment could be instituted, furnished results like the above, it is not unreasonable to expect far better terminations in the human patient where after-treatment such as washing out the bladder could be commanded.

The advantages of vesicorectal anastomosis may be summarized as follows: 1. Simplicity and shortness of time required for the operation. 2. No danger of ureteral constriction by the bowel scar, nor sloughing of an implanted trigone, as in Maydl's operation. 3. Comparatively little danger of infection. 4. It is not only applicable in exstrophy of the bladder, but also in other pathologic conditions of that organ rendering life a burden.

In concluding this paper I desire to extend my thanks to Dr. Sylvan Kunz, Dr. Mortimer Frank and Mr. Richard Espig, for their valuable assistance.

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ARGUMENT AGAINST SENATE BILL 34, FIFTY-SIXTH CONGRESS, FIRST SESSION, GENERALLY KNOWN AS THE "ANTIVIVISECTION BILL."

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On February 21, 1900, the Senate Committee on the District of Columbia, with Senator Gallinger in the chair, gave to advocates and opponents of the "antivivisection bill" a public hearing, at which I presented in its main features the following argument. After this hearing, on March 9, 1900, an amended or substitute bill, still designated S. Bill 34, was printed for the committee. The principal changes from the original bill made by this substitute are as follows: 1. The title now reads: "A bill for the regulation of vivisection in the District of Columbia." 2. The restrictions apply for the most part only to experiments on warm-blooded animals instead of to those on all vertebrates. 3. Experiments to acquire "surgical experience" are now allowed. 4. The class of officers of the United States Government who may experiment without a license from the District Commissioners is defined. 5. The use of other anesthetics besides ether and chloroform is allowed. 6. "Tests of foods" and "experiments relating to the communicability of disease" are added to the small list of experiments in which the animal need not be anesthetized nor killed afterward. 7. The permission to illustrate lectures in hospitals by animal experiments is withdrawn. 8. The requirements for special certificates—distinct from licenses—to experiment on a dog, or cat, on a horse, ass, or mule, are omitted. 9. The acquirement of physiologic knowledge is omitted as a permissible purpose of demonstrative experiments in lectures to medical students. 10. Licenses may be granted to any qualified person over 21 years of age. 11. All places where experiments are performed must be approved and registered. 12. The reports on the methods, the number and species of animals used, and the results of experiments must be made on January 1 and July 1, to the Commissioners, a delay not exceeding six months for alleged unfinished experiments being granted. These reports must be published.

The only concessions of importance made by these changes relate to the exclusion of cold-blooded animals, the omission of two classes of special certificates, and a wider choice in the selection of anesthetics. In several particulars the restrictions are made more severe, and in general the worst features of the bill remain unchanged.

In the following argument I have taken into consideration the changes made by the substitute bill, so that in some respects it differs from that presented at the public hearing on February 21.

It is most significant that, notwithstanding the chairman's suggestion at the outset of this hearing, that time might be saved by the omission of a detailed presentation of the benefits of vivisection, inasmuch as this bill, it was said, is not intended to hinder useful experimentation on animals, so large a part of the remarks of the previous speakers on both sides has been devoted to a discussion of this very subject. In truth, it could not be otherwise, for the principal line of division between the advocates and the opponents of this bill is marked by their opinions on the utility of animal experimentation. However much the advocates of the bill may assert that its enactment will not interfere with the proper uses of such experimentation and is designed only to check abuses, it is to be noted that the main part of their argument is an attack on the practically unanimous opinion of well-informed scientific and medical men that experimentation on animals is essential to the advancement of physiology and medicine and has conferred inestimable benefits on mankind. Nor is it surprising that antivivisectionists should cling tenaciously to this position, indefensible as it has become, for it is apparent that those who are convinced of the great value of experiments on animals, to science and humanity, will hesitate long before approving any legislation likely to check the progress of scientific and practical medicine.

Men who hold this conviction are not likely to give any favorable consideration to legislative proposals intended to restrict the use of an important method of scientific research until it has been demonstrated that its possible abuses are in fact common and great and uncontrollable by existing legislation and by public opinion, including that of the medical profession. They will inquire carefully whether the proposed legislation will actually reach the abuses, if these should be shown to exist, and, even if it should do so, whether it may not do more harm than good by obstacles put in the way of proper and useful experimentation. They may even pause to consider whether there may not be some inequality in singling out for penal legislation the infliction of pain on the lower animals for the purposes of biologic and medical science, while leaving untouched an immeasurably greater amount of suffering inflicted on animals by man for his food, his adornment, his amusement and other objects which it would be difficult to show are higher and more worthy than those of the physiologist and the physician.

I have sometimes wondered at the attitude of mind of professed humanitarians who are so eager to collect all testimony, even the most obscure, trivial and discredited, which may make the public believe that some new remedy or improved method of treatment, such as antitoxin or antiseptic surgery, demonstrated to the satisfaction of most physicians to be a priceless boon in saving human lives and relieving suffering, is of no value whatever. Still, it must be admitted that for the sake of their cause the antivivisectionists do well to ransack, as they do, medical journals and books for statements which may minimize the effects on the public of the constantly increasing evidences of the benefits to mankind, and indeed to animals also, derived from the results of animal experimentation. Of course, they can find statements in contradiction of almost any generally accepted truth in medicine, as they could in any science, but in view of the proverbial disagreements of doctors, and of the little interest which most of those who apply scientific discoveries have in informing themselves of the sources of their knowledge, it is on the whole surprising that the familiar list of medical quotations, which has so long done duty in antivivisectionist publications in opposition to the great value of experimentation on animals, should be so meagre, in contrast with the enormous preponderance of testimony on the other side, and should be representative of so few names of eminence, I believe scarcely one which would be generally recognized by physicians as of a writer especially competent to speak on this subject, however distinguished in other lines. So rapid have been the advances of medicine and surgery in recent years, attributable to knowledge gained from experiments on animals, that it may be urged that an adverse opinion expressed even a decade ago would be reversed to-day, but I am not sure that the exceptional physician who was blind to this source of light at any time since the days of Harvey would see it to-day, notwithstanding its greatly increased brilliancy.

It has seemed to me appropriate to say this much in explanation of the emphasis laid by previous speakers on the subject of the utility of vivisection, but it is not my purpose to set forth the actual benefits secured by this method of investigation. This has already been done by Dr. W. W. Keen, Dr. H. A. Hare and other speakers, although none of these gentlemen would claim that he had been able to present a tithe of the debt which physiology and the healing art owe to the results of animal experimentation. Those of the public who wish fuller knowledge on this subject, and who care to read a larger part of the evidence which has led the vast majority of the most humane of professions to approve of vivisection I would refer to the recent book by Stephen Paget, F.R.C.S. Eng.—"Experiments on Animals. With an introduction by Lord Lister." (London, 1900.)

One other point before I pass to the examination of the bill before us: I shall be so bold as to remind the distinguished lawyers on the other side, who have to-day so recklessly charged those with cruelty who experiment on animals, that the legal definition of cruelty given by the "Century Dictionary" is: "An act inflicting severe pain and done with wilfulness and malice." Judge Hoar, in a Massachusetts case, says: "Pain inflicted for a lawful purpose and with a justifiable intent, though severe, does not come within the statute meaning of cruelty." (James M. Beck, of the Philadelphia Bar: The Legal Aspects of Vivisection, *Medical News*, 1890, lvi, p. 280.) While I do not deny that cruel experiments, in the sense of heedless causing of pain, have been made, I am convinced that they are very exceptional. The accusation of cruelty, when made, as it often is by our opponents, and has been made to-day, against experimenters on animals, as a class, is false and slanderous. In no other group of cases in which animals are made to suffer for the benefit of man is equal care exercised to avoid the infliction of needless pain. The difference is simply immeasurable between the solicitude in this regard and the quantity of actual suffering inflicted in scientific experiments on the one hand and, on the other, the heedlessness and the vast unnecessary amount of pain inflicted in the slaughtering, the sexual mutilation, the transportation, the poisoning, and the hunting, trapping and shooting of animals. On the one side hundreds, on the other millions of animals are concerned annually; on the one side a serious purpose to advance scientific knowledge and directly promote the healing art, on the other the satisfaction of appetite, often in a luxurious way, the exercise of some convenience or economy, the gratification of the desire for sport or of some whim; on the one side insensibility to pain secured by anesthetics, as a rule, whenever practicable, and this is so in the great majority of cases, on the other very little regard to the avoidance or reduction of unnecessary suffering.

In speaking on a former occasion of the self-sacrifice and benevolence of the members of the medical profession, your chairman justly said that no legislation should be enacted that would unnecessarily hamper them in their pursuit of useful knowledge, and he has to-day very properly asked that it shall be pointed out in what way the proposed legisla-

tion would interfere with useful experiments, with such experiments, for example, as those cited by Dr. Keen, Dr. Hare, and other speakers. It is asserted with much insistence by its advocates, that this bill is "moderate," "reasonable and wise," "restrictive and not prohibitive," "not an antivivisection measure," "does not impede in any way the proper use of animal experimentation," "goes to the farthest extreme of concession in the anxiety of its framers to yield to the wishes of scientific men so far as may be consistent with the principle of legal supervision," "concedes everything of utility." It is my especial purpose to examine these contentions in the light of the specific provisions of the bill, and I hope to be able to demonstrate to the satisfaction of the members of this Committee that this bill is unnecessary, is vague and contradictory in some of its provisions, places the entire control of a scientific method of investigation in the hands of laymen not qualified to exercise such arbitrary powers, absolutely prohibits important and useful experiments and can be administered so as to prohibit all experiments, surrounds the practice of animal experimentation with absurd and vexatious restrictions, and, if enacted into law, would inflict serious injury on the progress of science and medicine.

I have already traversed much of this ground in my letter to a former member of this Committee, the Hon. Arthur P. Gorman, printed as Senate Document No. 104, 55th Congress, Second Session, (also in THE JOURNAL, Feb. 15, 1898, p. 285), which I beg leave to offer for your consideration. I would also call your attention to other documents of similar purport, especially the letter of the Secretary of Agriculture, the Hon. James Wilson, printed as Senate Document No. 112, 55th Congress, First Session, that of Dr. Dabney, President of the University of Tennessee and former Acting Secretary of Agriculture, to the Chairman of the Committee on the District of Columbia, the Hon. James McMillan, and the recent letter of Dr. Woodward (THE JOURNAL, February 10, p. 381), the Health Officer of the District of Columbia, to the Commissioners of the District.

As Dr. Salmon has pointed out at this hearing, and as Dr. Woodward has shown in his letter, just referred to, there is no need for additional legislation restricting the practice of animal experimentation in the District of Columbia. The existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university or scientific society." The bill before us attempts to define with considerable detail, what constitutes a properly conducted experiment, and with what success I propose presently to show. A commission of scientific experts would find it difficult, if not impossible, to prescribe with similar detail the proper conduct of all scientific experiments on animals, and most assuredly such experts have had no hand in the drafting of this bill. If it be asked, Who shall be the judge of the proper conduct of the experiments? I reply: In the first instance the scientific men who act "under the authority of the faculty of some regularly incorporated medical college, university or scientific society," then the governing bodies of these incorporated institutions, and in the final decision the courts, as provided by the existing law, and most certainly not, as proposed in this bill, the Commissioners of the District of Columbia, who have no special qualifications to judge of such a matter.

There is not a particle of evidence that abuse of animal experimentation has ever existed or is likely to arise in the District of Columbia or, if it should occur, of the inability of the present law to cope with it. I know that one can conjure up in his imagination horrible possibilities, to meet which no law would seem too severe, and that charges of atrocious cruelty are spread before the public by antivivisectionists with reckless disregard of the facts, but we court the fullest investigation, by any impartial body of men, of the actual conditions of animal experimentation in this District and in this country, and we are confident that such an investigation would show the groundlessness of these imaginings and the wantonness of these accusations. Before any such legislation as that embodied in this bill is recommended, in the face of the unanimous protests of the scientific and medical societies and of the great body of physicians of this country, it surely seems incumbent upon your honorable body to make such an official investigation as we have often asked for.

Although we are here to discuss this particular bill, and not the general subject of legislative restriction of experimentation on animals, I am free to confess that I consider the public opinion of the medical profession, which is as sensitive to actual cruelty as that of any "humane society," an efficient safeguard in this matter, and amply sufficient when combined, as it is here, with an adequate law. As has been said: "Probably the members of antivivisectionist societies do not believe that there is any such professional public opinion; but there is, and it is an effectual, though quiet, check on the few who need it. But if any influence from the outside could injure it, it would be the constant ignoring and denying of its existence. It is not generally found an incentive to honesty to tell a man: "you would be a thief if you could, and therefore I shall keep all my goods under lock and key when you are about, and have my eye on you when you don't expect it." Weak honesty grows strong when leaned upon; but even strong humanity, insulted and disbelieved in, may hear itself called callousness until it ceases to care for the charge. (Physiological Cruelty: or, Fact v. Fancy. An inquiry into the Vivisection Question. By Philanthropos. P. 100. London. 1883. This is the best book with which I am acquainted on the general subject of vivisection.)

If all that could be said against the legislation proposed in this bill were its needlessness, it might be allowed to cumber the statute books, with no charge against it more serious than meddlesomeness, albeit, to my thinking, that is not a slight charge. But this legislation is very far from being harmless. While it must be difficult for those unfamiliar with the methods and results of scientific inquiry and practical work in the directions touched by this bill to realize fully all of the ways in which the provisions of this complicated measure would hamper investigations of importance to mankind, enough can be made clear to any reasonable man to show that neither this bill nor anything like it should ever be enacted into law.

Of the many faults of this bill there is none more serious in principle or likely to be more hurtful in the actual working of the proposed legislation than that this bill puts in the hands of men, who need not be and are not likely to be physicians or men of science, arbitrary powers, requiring skilled knowledge in their use, concerning matters of the highest importance to medicine and biologic science and to the welfare of mankind. To the Commissioners of the District of Columbia, of whom two make a majority, is given uncontrolled power to determine by whom and where experiments shall be made, to disallow or suspend at any time permission once granted, to demand at stated times reports in any desired form or detail concerning the methods and results of experiments, which reports shall be published, and to be, in the last resort, the supreme judges as to whether a certain experiment will advance physiologic knowledge or knowledge "useful for saving or prolonging life or alleviating suffering," or will aid in the acquirement of "surgical experience." No provision is made for an appeal or a hearing on the part of any applicant or experimenter who may consider himself aggrieved. Of the partial exemption of officers of the Government and of division of authority with the President of the United States I shall speak later.

Nobody can foretell in what manner the commissioners will exercise these extraordinary powers if conferred on them. It lies entirely in their discretion to grant all licenses and certificates or to refuse all and thereby prohibit all animal experimentation in the District, except that conducted under severe restriction by officers of the Government. It can be confidently predicted that the antivivisectionists will use every political and other influence in their power to secure the appointment of commissioners committed to a policy hostile to animal experimentation. Physicians have other matters to attend to and rarely engage in political agitation. I know of no reason why either of the two eminent lawyers who have spoken to-day for our opponents should not be considered qualified for the office of Commissioner of the District of Columbia, but, entertaining the opinions on vivisection which they have expressed, how could they conscientiously grant a single license to experiment on animals? In whatever way the commissioners might exercise their uncontrolled discretion, whether they made the law mean much or little, one thing is certain: In matters requiring expert knowledge and of high importance to mankind, those who do not know would be put in supreme authority over those who know. This is a monstrously false and dangerous principle to embody in law. It needs knowledge, often a great deal of it, to do good, but none to hinder it.

It has been said that there is no more reason to object to the requirement of a license to experiment on animals than to that of a license to practice medicine. There are differences between the two cases, which I shall not pause to discuss, for this bill is not a simple licensing measure. To make the conditions of the two cases analogous, in accordance with the provisions of this bill, the law to license practitioners of medicine should provide that a body of laymen should determine the qualifications of applicants and grant the license to practice, that the practice of each licensee must be limited to certain specified localities, that the permitted manner of treatment

should be prescribed with some detail, that certain therapeutic procedures should be prohibited, that each practitioner must report at stated times his methods and results, and the number of patients treated to the licensing body, which shall publish the reports, and that a body of inspectors with no statement as to their qualifications should keep the licensed practitioners under surveillance and should report from time to time the results of their observations. Manifestly absurd as such requirements as these would be if applied to the regulation of medical practice, they are scarcely less absurd when applied, as proposed in this bill, to the legal regulation of animal experimentation.

If I were to enter into a criticism of the smaller details of this complicated bill. I should inquire, among other things, why only certain professors in a medical school are accorded the privilege of signing an application for a license, why, for example, the professors of pathology and of physiologic chemistry are excluded, but it seems to me more important for my present argument to take up the larger defects of the measure.

The bill "for the further prevention of cruelty to animals in the District of Columbia," originally introduced in the Fifty-fourth Congress, placed the officers of the United States Government completely under the control of the Commissioners of the District in respect to animal experimentation, although the experimental work of the United States Bureau of Animal Industry concerns itself with the agricultural and stock-raising interests of the entire country. The subjection of Government officers to the authority of the District Commissioners in a matter of this kind is so manifestly improper that the bill, after several modifications, now exempts from the necessity of securing a license from the commissioners any "medical or scientific officer of the United States Government duly authorized by the head of a department." But the bill still provides that those officers of the Government who engage in animal experimentation must report to the District Commissioners twice a year on "the methods employed, the number and species of animals used, and the results of their experiments, in such form and with such further details as the said commissioners may require," and all these reports must be published. It is not the head of a department who is to make these reports, but such of his subordinates as may be engaged in experimental work. All of the other restrictions of the bill, some of which will require interpretation by the administrators of the law, also apply to the experimental work of the officers of the general Government, which work is therefore still placed to a considerable degree under the control of officials of the District of Columbia.

The present bill, in its recently amended form, requires "that every place for the performance of experiments on living animals shall first be approved by the Commissioners of the District and shall be registered in such manner as the said Commissioners may direct." In the previous bill the provision as regards registration of places was mandatory only for places of medical instruction. It will be noted that this provision applies to experiments on any living animal, invertebrate as well as vertebrate. This bill is the first which has ever taken under its protection mollusks, worms, insects and other invertebrates. This is really so absurd that it may be presumed to be the result of inadvertence, but, if so, it illustrates the lack of care in the construction of the bill.

The requirement that no experiment shall under any circumstances be made except in a place previously approved and registered is a very injurious one. A number of instances might be cited of the ways in which this requirement may interfere with useful experimentations and even involve some danger to human beings and animals. An emergency may readily arise in which some inoculation test for diagnostic or other purposes can most advantageously be performed where the material obtained directly at autopsy or from a patient or sick animal is directly at hand. In some instances absolutely fresh material, possibly inoculation directly from one animal to another, or from a human being to an animal, is essential for the success of an experiment. There may be considerable danger involved in the transportation of some highly virulent material, perhaps for a considerable distance, to a registered place, and there may be good reason for not taking infectious material away from a locality already infected and introducing it into an uninfected registered place. To confine the work of an experimenter absolutely and under all circumstances to the particular place for which he has secured a ticket of registration is a hard and unnecessary restriction, and in introducing this provision the new bill has gone beyond its predecessors and beyond the British law.

Undoubtedly the provision of this bill, as of all antivivisection bills, which is dearest to the heart of the antivivisectionist, is that for the official inspection of experiments on animals. The bill provides (Section 6): "That the President of the United States shall cause all places where experiments on living warm-blooded animals are carried on in the District of Columbia to be, from time to time, visited and inspected without previous notice for the purpose of securing compliance with the provisions of this Act; and to that end shall appoint four inspectors, who shall serve without compensation and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him."

It will be observed that this section introduces a second authority in the administration of this law. The Commissioners of the District grant the licenses of persons and places, while the President of the United States appoints the inspectors and receives their official reports. This division of authority would not seem conducive to the smooth working of the law and might readily lead to serious conflicts in its two-headed administration, especially if one head be friendly and the other hostile to experimental investigations.

But the monstrous evil of the provision regarding inspectors is that not a word is said as to the need of any special qualifications on the part of those who are to scrutinize and report on the experimental work of physicians and scientific men. The duties of these inspectors, according to the law, will require them to base their reports on such matters as whether animals are completely anesthetized, whether movements of an animal are manifestations of conscious pain or only of reflex action whether experiments are conducted by competent persons and in a proper manner, and whether they are useful for the particular purposes specified in this bill, and fall under the categories of permitted experiments. Surely some knowledge of physiology and some appreciation of the needs of medicine and surgery are required for the performance of the remarkable and responsible functions of these inspectors.

The bill originally introduced provided that this inspection should be by an agent of the Washington Humane Society, a notoriously antivivisectionist society, which claims the responsibility for this bill. It can not be doubted that this Society and antivivisectionists in general will claim and in all probability will secure representation among the inspectors. It would be quite within the power of even one energetic and officious inspector, without physiologic knowledge and opposed, as most antivivisectionists are, to all investigations requiring experimentation on animals, to make the conditions of experimental work simply intolerable. Anybody who has serious and legitimate business to attend to has a right to object to constant intrusion and disturbance, and work requiring delicate manipulations and undivided attention can not go on under such interruptions. When to this nuisance is to be added the publication of official statements concerning difficult matters of which the observer is not qualified to judge, I submit that before you impose on experimenters this system of inspection you should be convinced that very great abuses are to be corrected and can be corrected by no procedure of a less drastic nature.

It is utterly misleading to draw any analogy between this sort of inspection and the inspection of banks and insurance companies, and it is a libel on common sense to assert, as is done by advocates of this measure, that fear of the exposure of wanton cruelties moves experimenters to object to any such system of inspection as that proposed in this bill. It is not true that secrecy surrounds the practice of animal experimentation. Reports of experiments are published in detail. Any qualified person has free access to the laboratories where such experiments are made, but to throw them wide open to the public is open to the same kind of objections as would be similar publicity for surgical operations. The antivivisectionists are fond of quoting from an address by Dr. Parvin, delivered in 1891, but I have never known them to cite in their writings, except in garbled form, the following sentences from this address: "Should the law restrict the performance of vivisection? I think it ought, chiefly as an expression of public sentiment and for the moral effect, for violations of its provisions could usually only be discovered by a system of espionage, by the employment of detectives, of spies and informers, utterly alien to our system of government, and who are as a rule abominable." This quotation in antivivisectionist publications always, I believe, stops short with the first third of the last sentence.

(To be continued.)

FIVE MEDICAL professors at the Moscow University have served their quota of 25 years and now retire.

Therapeutics.

Quinin in Malaria.

The following clinical note is from Dr. Ballard, health officer of Natchez, Miss:

In the simple intermittent fever quinin is undoubtedly a specific; but when cured, and no change is made in the environments—as with the cotton planter of the lowlands on both sides of the river—reinfection is certain to take place, and in these cases quinin, in usual doses, is extremely dangerous. All cases of hematuria of malarial origin occurring under my observation (in whites) have been due to reinfection and followed the protracted use of quinin. One or two grains dissolved in half a dram of dilute phosphoric acid is a benefit in preventing a second invasion, and is a tonic of superb power. I use something like the following:

℞. Quinæ sulph. 3ii
Tinct. ferri chloridi 3i
Acidi phosphorici ..... ℥iv
Spts. frumenti, q. s., ad ..... ℥viii

M. Sig. Teaspoonful in one-third glass of water at meals.

Now as to the treatment of hematuria, when found. I use ergot in half-dram doses every three or four hours, and strychnin hypodermically in full doses. I flush the bowels with the hyposulphite of sodium, and I have found an emulsion of turpentin of service in some cases. If the patient is restless and fretful, an enema of sixty grains of potassium bromid is of unquestioned utility.

The so-called typhomalarial fever is a malarial fever in which quinin is entirely useless, save in small doses as a tonic. I have never seen a case of intermittent fever that would not yield to an acid solution of quinin, if a cathartic is used to begin treatment. For this I use:

℞. Hydrarg. chloridi mitis ..... gr. x
Podophyllin
Ipecac, āā ..... gr. i
Ext. nucis vomicæ ..... gr. ss
Ext. hyoscyami ..... gr. iv
Sodii bicarb. ..... gr. xi

M. ft. capsulæ No. vi. Sig. One hourly until two are taken, and repeat every third day.

Experimentia docet. We do *not* use quinin in the hemorrhagic forms of malarial fever, and are now successful, whereas we were failures with quinin. —*Therap. Gazette.*

Suppuration of the Ear.

Lanoix, in *Rev. Medicale*, states that picric acid, being not only analgesic and antiseptic, but also keratoplastic, he was led to employ it in suppuration of the ear, when it is sought especially to cauterize the secreting membrane of the tympanum. He has attained unhoped-for benefits from its use. He uses the following solution:

℞. Acidi picrici ..... gr. ii
Alcoholis—90 per cent ..... m. xlv
Aquæ destil ..... fl℥v

M. The solution is left for some minutes in contact with the ear. The treatment induces desquamation of the tympanum and of the meatus, which calls for frequent cleansings. This action of picric acid contraindicates its use in cholesteatoma. —*N. Y. Med. Jour.*

Treatment of Migraine.

Lyon (*Revue de Therapie*, February 1; *British Medical Journal*, March 24, "Epitome") treats the attack of migraine with antipyrin—unless there is some coexisting renal disease—given in Vichy water or in cachets with an equal quantity of sodium bicarbonate or in the granular effervescent form. If there is gastric intolerance the drug may be given in solution as an enema. Sometimes a combination of acetanilid, phenacetin and quinin valerianate is more efficacious. Sodium salicylate, methylene-blue and caffein, either alone or combined with sodium benzoate may be recommended. If caffein be rejected by the stomach it may be given hypodermically. Aconitin may be tried in minute doses. The prophylactic treatment is both dietetic and hygienic. The patient should eat moderately and abstain from all alcoholic drinks, in fact, should take water only. He should avoid all indigestible articles of diet and live principally on milk and vegetables. Tobacco should be interdicted and a sedentary life avoided. Errors of refraction should be corrected and massage with suitable baths tried. Alkaline baths are of especial value for the rheumatic and the gouty. For the neurasthenic the use of phosphates alternating with arsenic, either with or without iron, is a promising plan of treatment.

Syphilitic Alopecia.

Gaucher, in *Riforma Medica*, recommends the following: The hair should be kept short, and frequent applications of the following lotion made to the head:

℞. Hydrarg. chloridi corrosivi ..... gr. iii
Chloralis ..... gr. lx
Resorcin ..... gr. xxx
Olei ricini ..... gr. xv
Alcohol (at 90 degrees) 3l

M. At the same time friction should be made with the following ointment:

℞. Calomel ..... gr. xlv
Vaselini 3xv
Acidi salicylici ..... gr. iv

Or, the following:

℞. Precipitated sulphur ..... gr. xlv
Vaselini 3xv

This latter ointment is to be prepared when the alopecia is accompanied by seborrhea and pityriasis of the hairy scalp. —*N. Y. Med. Jour.*

Treatment of Burns.

According to the *Jour. de Méd. de Paris* of Nov. 19, 1899, the following treatment may be instituted in cases of burns:

Compresses saturated with a solution of potassium nitrate may be applied, the solution being of the strength of 5 per cent. This preparation relieves the pain, and prevents a rise of temperature. The patients may be placed in a warm bath containing this material. If the well-known carron-oil or linimentum calcis is employed, it is suggested that carbolic acid in the strength of 1 per cent. should be added to it, or that thymol in the strength of 5 per cent. should be applied; or vaselin containing 10 per cent. of boric acid may be used. The following formula is said to be employed by Réclus.

℞. Vaselini ..... ℥ii
Acidi borici 3i
Antipyrin 3i
Iodoformi ..... gr. xiii

Another one is:

℞. Vaselini ..... ℥iii
Essence of thyme
Essence of geranium
Essence of origanum, āā ..... gr. iv
Sodium naphtholate ..... gr. xv to xlv

Other formulæ are as follows:

℞. Mentholi
Iodoformi, āā ..... gr. xv
Glycerini ..... ℥iii

℞. Cocaini ..... gr. iv
Salol 3i
Vaselini ..... ℥i

℞. Europhen ..... gr. xxx
Lanolini
Vaselini, āā ..... ℥ii

℞. Orthoform ..... gr. xlv
Vaselini 3i

All these ointments are intended to prevent suppuration and to relieve pain and burning.

Another method of treatment is to apply bismuth subnitrate and other drying materials in powdered form, particularly where the burn is wet and bleeding.

Still another application which is excellent where it is desired to favor cicatrization in burns which have existed for some little time is the following prescription:

℞. Ichthyol ..... gr. xv—xxx
Magnesii carbonatis ..... ℥iii
Zinci oxidi ..... ℥vi
Thiol
Talc.
Bismuthi subnitratis, āā ..... ℥i

M.

So far as general treatment is concerned, the patient should receive opium to relieve the pain, and if necessary subcutaneous injections of morphin in small doses, and during the period

of suppuration, if it occurs, the system should be supported by means of tonics, such as quinin, kola, and iron.

—*Therap. Gazette.*

Treatment of Hemorrhoids.

The following prescriptions are given in *La Presse Médicale:*

℞. Chrysarobin ..... gr. i
Iodoformi ..... gr. ss
Extract belladonnæ ..... gr. 1/8
Cacao butter ..... gr. xxx
M. ft. One suppository.

Two or three of these suppositories are to be inserted into the bowel each day, or, instead of these suppositories, the following ointment may be used:

℞. Chrysarobin ..... gr. xii
Iodoformi ..... gr. v
Ext. belladonnæ ..... gr. x
Vaselini ..... ʒss
M. Sig. Apply locally several times a day.

If small indurated projections of skin and mucous membrane are present, with a good deal of induration around the part, the following may be employed:

℞. Potassii iodidi ..... gr. xv
Iodini ..... gr. ii
Glycerini ..... ʒi
M.

This is to act as a local alterative. Later, if irritation is absent, a stronger solution may be employed, composed of:

℞. Potassii iodidi ..... gr. lxxv
Iodini ..... gr. xv
Glycerini ..... ʒiss
M.

Small doses of distilled extract of hamamelis may also be given internally with each, and continued for several months.

Sciatica.

Siegrist, of Zurich, has found the application of hot moist compresses to afford striking relief in this affection, says the *New York Med. Jour.* A piece of flannel is placed in very hot water, then wrung out so that it does not drip. This can be done conveniently by wringing it inside a towel in such a way as to protect the hands. The flannel is then laid along the thigh of the patient—if the skin is very sensitive a layer of flannel is placed under the compress—and the whole covered with several thick layers of dry flannel. The compress is changed in about ten minutes, and the process kept up for an hour or two at a time, and repeated several times a day. The value of these fomentations in many painful affections is well known to students of hydrotherapy, but is not sufficiently recognized by physicians in general. The treatment demands considerable time, and must be skilfully executed in order to gain the desired results.

Alterative.

℞. Arsenici chloridi ..... m. i
Ammon. chloridi ..... ʒii
Tinct. ferri chloridi ..... ʒiv
Hydrarg. chloridi corrosivi ..... gr. iss
Syrupi ..... ʒiii
Aquæ, q. s. ft. ..... ʒvi
M. Sig. One teaspoonful three times a day.

Syphilis.

℞. Hydrarg. protoiod ..... gr. v to x
Strych. sulph. ..... gr. ss
Ferri sulph. ..... gr. xx
Pepsin pulv. ..... gr. xl
M. ft. in cap. No. xx. Sig. One capsule after each meal.

—*Dr. J. D. Thomas: Intern Med. Mag.*

Sporadic Dysentery.

℞. Pulv. ipecac et opii	gr. xxx	2
Bismuthi subnitratis	ʒiv	16
Salol	gr. xxx	2

M. et ft. Chart No. xii. Sig. One every hour or two.

—*J. M. Anders.*

Ointment for Gonorrheal Rheumatism.

℞. Salol ..... 8 parts
Menthol ..... 5 parts
Ether ..... 8 parts
Lanolin ..... 60 parts
M.

Nephritis in Children.

℞. Liq. ammon. acetatis ..... ʒi
Tinct. digitalis
Spiritus chloroformi, āā ..... ʒi et m. xx
Aquæ dest., q. s., ad ..... ʒviii
M. Sig. Tablespoonful three times a day to children from 6 to 10 years old.

—*Ashby: Med. Record.*

Gastralgia.

Dr. Saundby, of Mason College, Birmingham, recommends the following method: The patient is put to bed, receives for sole nourishment 1 fluid ounce of a mixture, in equal parts, of milk and lime water every hour, the quantity to be gradually increased to 4 fluid ounces every hour as the symptoms disappear. At the same time, two tablespoonfuls of the following mixture are given three times a day:

℞. Magnesii sulphatis 3vi
Ferri sulphatis ..... gr. xv
Acidi sulphurici diluti ..... ʒiiss
Aquæ menthæ pip. ..... ʒviii

The rapid improvement under this régime soon permits the use of a small quantity of bread and scraped meat, then solid foods, and finally recovery ensues.

—*Merck's Archiv.*

Medicolegal.

Dying Declarations Touching Accidents.—The Supreme Court of Louisiana points out, in the case of Marler vs. the Texas Pacific Railway Company, that the circumstances under which dying declarations are made, with a view to testimony in criminal cases, differ greatly from those where they are made with reference to future civil proceedings for damages occasioned by the injury causing death. In the one case the party making the declaration has no personal interest in making a false statement, and would be actuated in doing so only by hatred or malice, while in the other relief for the family he is leaving behind him might furnish a strong motive for giving a wrong version of the facts of the occurrence. Hence the court holds that such declarations are not admissible in evidence in a civil action brought to recover damages, though made under a sense of impending death or even if made to the physician called in to minister to the party particularly when not elicited to aid him in treating the case.

Statements of Experts are Advisory Only.—This is the view taken by the Supreme Court of Missouri. For example, in the malpractice case of Hoyberg vs. Henske, the jury was told, in effect, that in determining the question as to whether or not the defendant exercised such skill and care of the plaintiff's broken arm as, under the law, he should have exercised, it was not bound by the opinion of expert witnesses, but had the right to disregard all or any part of such opinions as appeared to it to be unreasonable. In this instruction the supreme court says that it fails to recognize the vice which counsel sought to point out. It is the established law, as declared by this court, it goes on to state, that, where experts are called to testify, their statements are not to be considered as evidence of facts, but are of an advisory nature, and they are permitted to express opinions because of the peculiar knowledge they possess. But, the court continues, juries are in no wise bound to blindly accept their ideas, but, after receiving the advice of experts, are permitted to use their own judgment in passing on the things concerning which the opinions are given, and they are necessarily permitted to disregard the testimony of such experts as may appear to them unreasonable. Were it not so, the court thinks that, because of the widely diversified notions and wholly different results arrived at by separate individuals, even when forming conclusions on the same facts and circumstances, juries would be wholly at sea, and to refuse to permit them to be their own judges of what is reasonable and what is unreasonable would operate as a failure of the purposes for which they are called in this class of cases. Nor does the court appreciate the force of the criticism that the instruction under discussion was defective in that it failed to tell the jury that, in order to disregard the opinions of the experts presented to them, they must do so solely on some other

facts and circumstances in the case drawn out by the testimony. It maintains that the right of a jury to reject the mere opinion of an expert or experts is not more restricted than the right to reject the testimony of a nonexpert upon a question of fact. Juries are required, in cases of this character, to apply their own experience, knowledge, and judgment, and the issue is to be determined, not merely by the opinion of experts, but, further, by the exercise of their own judgment of the facts on which the opinions are given. Finally, a verdict of $5500, the court holds not excessive for malpractice, where a child 4 years of age broke one of the bones of the left arm, just above the elbow, by a fall from a lounge, and the treatment was such that the arm festered and parts of the flesh came out and then left the arm without strength from the elbow down.

Communication About Medical Examiner.—Omitting here the names, a medical director of a life insurance association wrote this letter to an agent at a certain place, with reference to the medical examiner there: "I have before me the application of ——. This application shows on the face of it to be a forgery of his signature, and it is written by Dr. —— instead of the applicant. He has fallen down in his undertaking to imitate the handwriting of the applicant, by his misspelling the name. We have returned the application to the doctor, and given him to understand that it must be corrected at once; and you are hereby notified that in the future no more examinations will be accepted, when made by Dr. ——. We will appoint another physician at that place, and will notify you of the appointment of same. We have no longer any confidence in Dr. ——, and, as above stated, we can not accept any more examinations made by him." The doctor referred to in some way learned of the letter, and sued the medical director and association for libel. On the trial the action was dismissed as to the medical director, and the doctor obtained a verdict and judgment for $2300 against the association. But the judgment of the district court is reversed by the Supreme Court of Iowa. The jury was instructed that the letter of communication, made and published in the manner and under the circumstances under which the same was made and published, was not a privileged communication, and the circumstances under which the same was made and published did not justify the association in so making and publishing the same. More than that, it was instructed that the letter was libelous in and of itself, and that the only matter to be considered was the amount of damages. Not so, however, thinks the supreme court. It holds that the addressee, as soliciting agent, was entitled to know who was the accredited medical examiner of the association at the town where he was making applications. The company also had the right to inform its soliciting agent of the discharge of its medical examiner in the locality where the soliciting agent was operating. The occasion, it therefore holds, Nichols vs. Eaton, was undoubtedly privileged, and it was the duty of the court to so instruct the jury. That being established—that the occasion was privileged, and that the publication was about a matter in which both parties had an interest, excess of statement the supreme court pronounces material only as bearing on the question of malice—a question of fact for the consideration of the jury.

Who May Testify as to Insanity.—The Court of Appeals of Kentucky says, in the case of Abbott vs. Commonwealth, that it is well settled in that state that persons who are not experts, but by association and observation have had an opportunity to form an opinion as to the sanity of a person, may testify to that opinion; giving, also, the facts on which the opinion is based, so that the jury may judge for themselves what weight the opinion is entitled to. The reason it gives is that insanity if often shown by a flash of the eye, an expression of the face, a movement of the muscles, or a number of slight circumstances which, while they may produce a conviction in the mind of the observer, can not, in many cases, be reproduced before the jury as they were exhibited to the eye of the witness, so that, if testimony of this sort were not allowed, great injustice would in many cases be done. The judgment of a person's intimate friends and acquaintances as to his soundness of mind it holds is therefore always competent in cases where the insanity is pleaded as a defense to crime. Moreover, the courts says that it is not necessary that a medical witness should claim to be an expert on the subject of insanity to entitle him to give an opinion as an expert on a hypothetical case. Any practicing physician, doing a general practice, who has studied the subject of diseases of the mind, with other forms of disease, it holds, may testify on the hypothetical case, on the ground that, as insanity is a disease, one who is skilled in detecting and treating diseases is competent to give an opinion, the extent of his learning and experience going alone to his credibility. Yet it manifestly does not consider every physician competent to give an opinion as an expert on the question of insanity, as it holds, right in this connection, that the testimony of a certain doctor was properly rejected, as it did not appear that he had given the subject of insanity a sufficient study to entitle him to speak as an expert on the hypothetical case put to him, though it does not explain any further just what his qualification or disqualification was.

Both May Testify in Abortion Case.—A husband sued a physician for damages for producing an abortion on his, the plaintiff's, wife. This was in Missouri, where the statute modifying the general rule of the common law prohibiting a married woman in testifying in behalf of her husband could not be said to include a case of this character. There, too, a physician or surgeon is prohibited from testifying concerning any information which he may have acquired from any patient while attending him or her in a professional character, and which information is necessary to enable him to prescribe for such patient as a physician, or to do anything for such patient as a surgeon. Naturally, therefore, there was objection made to the wife being allowed to testify in behalf of her husband. Likewise, objection was made, on the other side, to the physician testifying, in his own behalf, concerning information which he acquired from the wife of the plaintiff while attending her in a professional character, by an examination of her body, and from conversation with her, which was necessary, according to his testimony, in order to enable him to treat her; as well, also, as to the conversations had between himself and her with respect to her condition, and the treatment necessary in her condition—what he said to her, etc. Taking up this last objection first, the Supreme Court of Missouri, Division No. 2, points out, Cramer vs. Hurt, that the facts with respect to the condition of the wife, the doctor's treatment of her, and the facts obtained from her with respect to her condition, were within the exclusive knowledge of her and himself. No other person knew, of his own personal knowledge, anything about them. Hence, while it must be understood that such evidence can not be admitted, merely because other evidence of the facts can not be obtained, in a suit against a physician by the husband for damages, the court holds that, where it is clear that no other person besides the physician and the wife knows anything personally about the facts, and the proof of such facts is necessary in sustenance of his defense, it is no error to permit him to testify to such facts in order to prevent injustice being done. But it must, the court continues, for the same reason, follow that the wife is a competent witness for her husband, notwithstanding at common law, as a general rule, a married woman is incompetent to testify in behalf of her husband, and the state statutes may not have removed the disability as to such a case as this. Moreover, the court thinks that the wife is a competent witness in such a case on general grounds of public policy, for, it says, if it be known that a married woman is a competent witness for her husband in a suit for damages by him against a physician who produces an abortion on her without the consent of her husband, in consequence of which her health is injured, and he is deprived of her services, to which he is entitled by law, and expenses are entailed on him in her nursing and for medical treatment, it might, to some extent, put a stop to such revolting and unnatural practices. However, the court does not consider that the privilege, which belonged to the wife personally, was waived by her being offered as a witness by her husband, nor by his bringing an action of this kind.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical Record (N. Y.), May 5.

1.—*Perforating Duodenal Ulcers. Robert F. Weir.
2.— Preliminary Report on New and Simple Method of Sterilizing Catgut. Charles A. Elsberg.

Medical News (N. Y.), May 5.

3.—*Medical School of the Future. H. P. Bowditch.
4.— Truth in Medicine. E. G. Janeway.
5.—*Perforating Duodenal Ulcers. (*Continued.*) Robert F. Weir.
6.—*Present Status of Rectal Surgery. Joseph M. Mathews.

Philadelphia Medical Journal, May 5.

7.—*Medical School of Future. H. P. Bowditch.
8.—*Adaptation of Pathogenic Bacteria to Different Species of Animals. Theobald Smith.
9.—*Some Physiologic Methods and Means Employed by Animal Organism in its Continual Struggle Against Bacteria for Maintenance of Life and Health. S. J. Meltzer.
10.—*Relation of Bacteriology to Medicine. Richard C. Cabot.
11.—*Bacterio-Therapeutics, with Especial Reference to Tuberculosis. Edward R. Baldwin.
12.—*Sociologic Status of the Physician. Clarence John Blake.
13.—*Nephrectomy for Large Aneurysm of Right Renal Artery, with Résumé of Twelve Formerly Reported Cases of Renal Aneurysm. W. W. Keen.
14.—*President's Address at Decennial Convention for Revision of U. S. Pharmacopeia. H. C. Wood.
15.—*Recent Advances in Knowledge Concerning Etiology of Malarial Fever. William Sydney Thayer.

Boston Medical and Surgical Journal, May 3.

16.—*Medical School of the Future. H. P. Bowditch.
17.—*Perforating Ulcer of Duodenum. Robert F. Weir.
18.—*Ideal Ration for Army in Tropics. (*Continued.*) Edward L. Munson.

New York Medical Journal, May 5.

19.—*General Remarks on Pathology and Treatment of Stricture of Urethra. Charles Greene Cumston.
20.—*Nitrous Oxid; Ether; Chloroform. (*Concluded.*) S. Ormond Goldan.
21.—*What is Basis of Modern Medical Conception? J. Homer Coulter.
22.—*Appeal for Systematic Treatment of Consumptive Poor. John F. Russell.
23.—*Management of Hair During and After Fevers. George Thomas Jackson.
24.— Effeminate Men and Masculine Women. William Lee Howard.
25.—*Practical Points in Ether Anesthesia. C. Floyd Burrows.

Cincinnati Lancet-Clinic, May 5.

26.— In Memoriam. John A. Murphy.
27.—*Ophthalmic Memoranda. David DeBeck.

Medical Review (St. Louis, Mo.), May 5.

28.—*Occurrence of Mould in Stomach and Its Probable Significance Max Einhorn.
29.—*Christopathy, Bibliopathy and Christian Science. C. H. Hughes.
30.— Report of Librarian of St. Louis Medical Library Association for Year Ending April 25, 1900. F. J. Lutz.

Medical Age (Detroit, Mich.), April 25.

31.—*Tricuspid Regurgitation. W. C. Huntington.
32.— Treatment of Venereal Ulcers. N. E. Aronstam.
33.—*Relation of Eye-Strain to Epilepsy, Insanity and Allied Conditions. Thomas P. Satterwhite.

Pediatrics (N. Y.), April 15.

34.—*Nephritis in Childhood, Especially that Occurring in the Course of Malaria. Dr. Moncorvo.
35.—*Care of Premature and Feeble Infants. S. W. Ransom.
36.—*Some Reasons why Tuberculosis Spreads More Rapidly among Cattle than in Human Race. Walter W. Gardiner.

Medical Fortnightly (St. Louis, Mo.), April 10.

37.— Short Clinic on External Urethrotomy. Reginald Harrison.
38.—*Etiology of Beri-beri. Albert S. Ashmead.
39.— Treatment of Venereal Lesions. Mayer Shoyer.

Virginia Medical Semi-Monthly (Richmond), March.

40.— Some Recent Cases of Mastoiditis with Remarks. Joseph A. White.
41.— Gonorrheal Urethritis in Male. Chas. A. Labenberg.
42.— Medico-Religious Society. W. T. Parker.
43.— Puerperal Eclampsia. William Hoskins.
44.— Normal Saline Solution of Buffalo Lithia Water Used by Rectal and Subcutaneous Injection. Benj. K. Hays.

Columbus Medical Journal, April.

45.—*Obstipation-Hypertrophy of Rectal Valve. Thos. Charles Martin.
46.— Examination and Treatment of Ulceration of Abdominal Rectum and Sigmoid Flexure, with Comparison of Old and Modern Methods. Sterling B. Taylor.

American Journal of the Medical Sciences (Philadelphia), May.

47.—*Analysis of Fifty-one Cases of Pneumothorax. John Lovett Morse.
48.—*Acute Pneumonic Form of Tuberculosis. Arthur W. Elting.
49.—*Senile Bronchitis. Reynold Webb Wilcox.
50.—*Case of Multiple Neuro-Fibromata of the Ulnar Nerve. W. W. Keen and William G. Spiller.
51.—*Differential Diagnosis of Ectopic Gestation. With Report of Cases. Edward P. Davis.
52.—*Two Cases of Tabes Dorsalis in Negroes—Husband and Wife. Albert P. Francine.
53.—*Clinical Aspect of Plague, with Illustrative Cases. (*Concluded.*) Frank G. Clemow.
54.— Critical Summary of Literature on Surgery of Stomach. Charles H. Frazier.

Toledo Medical and Surgical Reporter, May.

55.— Pure Food, Pure Drugs—How They May be Obtained. C. H. Reed.
56.— Fads and Fancies. Herbert E. Smead.
57.— How Electricity Becomes a Remedy. H. L. Hall.
58.— Treatment of Chronic Urethritis with Clinical Reports. Eugene C. Underwood.

Post-Graduate (N. Y.), April.

59.— Case of Restoration of Base of Bladder and Urethra, by Plastic Surgery. Bache McE. Emmet.
60.— Ante-partum Diagnosis. George L. Brodhead.
61.—*Clinical Value of Newer Methods in Treatment of Puerperal Sepsis. John O. Polak.
62.—*Palliative Treatment of Carcinoma Uteri. Hermann J. Boldt.
63.— Cystitis in Female and Its Management. Abram Brothers.
64.— Retrospect of Forty Cases of Operative Gynecology. George G. Ward, Jr.
65.— Obstetric Aphorisms. C. A. Von Ramdohr.
66.— History of Case of Mild Tetanus Following a Slight Operation for Fissures of Anus. Bache McE. Emmet.
67.— Clinical Notes on Reflexes of Uterine Disease. Bache McE. Emmet.
68.— Douglas' Cul-de-sac Lacerated during Labor. Stephen P. Truex.
69.— Lap-Suture in Abdominal Surgery. William E. Butler.
70.—*Intrauterine Implantations of Ovary. A. Palmer Dudley.

Clinical Review (Chicago), May.

71.—*Effect of Strong Heat in Pruritus—its Use by Napoleon and Others in Domestic Practice. Edmund Andrews.
72.— Spastic Spinal Paralysis; Secondary Descending Sclerosis. Henry M. Lyman.
73.— Clinical Lectures on Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
74.— Deformities of Infantile Paralysis. John Lincoln Porter.
75.— Gastric Ulcer and Uterine Retroversion; Hematocele; Uterine Fibroid; Biliary Calculi; Pyosalpinx; Removal of Tubes; Rectal Fistula; Carcinoma of Uterus. A. J. Ochsner.
76.— Clinical Lecture on Obstetrics and Gynecology; Concealed Hemorrhage. Denslow Lewis.

Providence Medical Journal, April.

77.— Effects of Chemical and Physical Influences on Development of Embryo. A. D. Mead.
78.— Résumé of Six Months' Service in Infants' Department of Providence Lying-in Hospital. H. G. Partridge.
79.— Headache. George Carroll Smith.
80.— Brief Description of New Wing at Rhode Island Hospital. John M. Peters.
81.— Gunshot Wounds of Orbit. V. L. Raia.
82.— Case of Empyema of Frontal Sinus. F. T. Rogers.
83.— Fatigue in School Children. Alfred M. Merriman.

Pennsylvania Medical Journal (Pittsburg), April.

84.—*Some Drugs in Enteric Fever. A Therapeutic Study. J. C. Wilson.
85.—*The Alleghenies for Our Tuberculous. Chas. F. Spangler.
86.—*Prophylaxis and Management of Phthisis. Joseph Forrester.
87.— Neurasthenia. Thomas Wray Grayson.
88.— Valvular Disease of Heart. A. M. Miller.
89.— How I Treat an Ordinary Fracture. John C. Sullivan.
90.— Case of Intussusception of Bowel. Ellis Phillips.
91.— "Special Inflammation of Uterus and Adnexa." John Milton Duff.

Kansas City Medical Index-Lancet, April.

92.— Surgical Technique. Milo B. Ward.
93.— Formaldehyde. Virginius W. Gayle.
94.—*Relation of Uric Acid to Migraine. John A. Lichty.
95.— Tissue Building and Nerve Toning in Tuberculosis. William J. Maybury.
96.—*Relative Curability of Nervous Diseases. John Punton.

Southern Practitioner (Los Angeles), April.

97.—*Report of Second Operation for Tubal Pregnancy on Same Patient within a Year. E. R. Smith.
98.— Ligature versus Clamp and Cautery in Treatment of Internal Hemorrhoids. Wellington Burke.
99.— Ancient and Modern Therapeutics. E. Henderson.
100.— Review of Mrs. Eddy's Book on Science and Health. P. J. Parker.

Interstate Medical Journal (St. Louis, Mo.), April.

101.— President's Address before Tri-State Medical Society at St. Louis, Mo., April 4, 1900. O. Beverly Campbell.
102.—*Treatment of Acute Articular Rheumatism at Mt. Sinai Hospital, New York City. L. A. S. Bodine.
103.—*Diagnosis of Pneumonia, with Report of Unusual Cases. Louis H. Behrens.
104.— Treatment of Arm Presentation. Denslow Lewis.
105.— Analytic Diagnosis of Abdominal Tumors. (*Continued.*) Byron Robinson.
106.— Antitetanic Serum in Treatment of Case of Acute Traumatic Tetanus. David C. McVail.

Texas Medical News (Austin), April.

107.— Measles: Value of Koplik's Sign. J. S. Lankford.
108.— Report of Cases. O. L. Norsworthy.
109.— Infant Feeding. R. W. Knox.

Journal of Tuberculosis (Asheville, N. C.), April.

110.— Necessity for Isolation and Hospital Care for Poor Consumptives. J. C. Wilson.
111.— Work Being Done Through Private Charity in Case of Consumptive Poor. W. N. Ashman.

112.—*Latency or Cure of Pulmonary Tuberculosis. Karl von Ruck.

Memphis Lancet, April.

113.— Case of Advanced Extrauterine Pregnancy. Operation Seven Weeks after Completion of Term. R. B. Maury.
114.— Why I Use Pepto-Mangan "Gude." An Experimental Demonstration. Wm. Krauss.
115.— Report of Five Cases of Typhoid Fever in Infancy and Early Childhood. Edward D. Mitchell.
116.— Chronic Abscess of Liver, with Report of Case. M. Goltman.
117.— Two Cases of Hysteria with Prominent Eye Symptoms. E. C. Ellett.

Medical Register (Richmond, Va.), March.

118.— Arthritis Deformans. John D. Thomas.
119.—*Further Report on Diaphoresis in Pneumonia. Clifton M. Miller.
120.— Report of Case of Fracture of Skull. Frank M. Cunningham.
121.— The Druggist. F. M. Reade.
122.— Report of Eight Cases Demonstrating Improvement in Hearing Obtained by Removal of Portion of Middle Turbinated Bone. J. P. Davidson.
123.— Aseptic Confinement. Charles R. Robins.

Southern Practitioner (Nashville, Tenn.), May.

124.— Address to Graduating Class of Medical Department of University of Tennessee. William D. Haggard, Jr.
125.— Intestinal Obstruction. (*Continued.*) Richard Douglas.
126.— Suggestions of Causative Relationship Between Uricacidemia and Urticaria, with Report. Halcyon A. Wilbur.

University Medical Magazine (Philadelphia), April.

127.—*Plantar or Toe Reflex. Babinski's Symptom. Horatio C. Wood.
128.—*Dermoid Cystoma Developing in Pelvic Connective Tissue, with Report of Case. Henry D. Beyea.
129.— Hernia of Vermiform Appendix. John H. Jopson.
130.— Case of Large Aneurysm of Left Common Carotid Artery and of Aorta Treated by Distal Ligation and by Tufnell Method. E. R. Edson.
131.— Diagnosis of Chlorosis and Chloro-Anemia. Alfred Stengel.
132.— Large Dermoid Cyst of Ovary in Child of Seven Years. James Herbert McKee.
133.— Recovery of Vision by Iridectomy, with Removal of Lens-Capsule and Lens-Débris in Case of Blindness of More than Thirteen Years' Duration. Charles A. Oliver.

Kingston Medical Quarterly (Kingston, Ont.), April.

134.— Clinical Report of Case of Infective Endocarditis. Geo. Hodge.
135.— Rotunda Hospital. Jennie G. Drennan.
136.— Bubonic Plague. W. T. Connell.
137.— Case of Appendicitis. E. Ryan.
138.— Eye Lesions in Paranoia and Paretic Dementia. J. C. Connell.

Seaboard Medical and Surgical Journal (Norfolk, Va.), April.

139.— Christian Science from Scholarly Standpoint. C. A. F. Lindorme.

New Orleans Medical and Surgical Journal, May.

140.—*Note on the Interval Between Infecting and Secondary Cases of Yellow Fever from Records of Yellow Fever at Orwood and Taylor, Miss., in 1898. H. R. Carter.
141.—*Clinical Observation on Heroin and Heroin Hydrochlorid as Compared with Codein and Morphin. F. C. Floeckinger.
142.— 1. Undiagnosticated Elbow Injury. 2. Movable Kidney. W. W. Keen.

American Journal of Surgery and Gynecology (St. Louis, Mo.), April.

143.—*Some Pathologic and Clinical Phases of Gall-Stones. A. H Cordier.
144.—*A Few Practical Points which will Prevent Troublesome Complications in Fractures of Ankle and Elbow. A. J. Ochsner.
145.— Cases of Head Injury. Geo. W. Cale.
146.— Vaginal Hysterectomy; 225 Consecutive Cases; Four Deaths. Byron Robinson.
147.— Case of Double Vagina and Double Uterus; Four Pregnancies. Herman E. Pearse.
148.— Report of Five Operative Cases of Tubal Gestation. R. J. Christie, Jr.
149.— Suppuration of Wound after Abdominal Section, Based on an Analysis of 114 Consecutive, Unselected Abdominal Sections without a Death. Hunter Robb.
150.— Some Points Worthy of Consideration by the General Surgeon. D. S. Fairchild.

New England Medical Monthly (Danbury, Conn.), May.

151.— Observations on Treatment of Strangulated Hernia, its Complications and Sequelæ. (*Concluded.*) J. Coplin Stinson.
152.— Some Properties of Utropin, and Some of the Indications for its Use. Leopold Casper.
153.— Albuminuria in Pregnancy: Its Causation and Treatment. E. M. Smith.
154.— "Allenbury's" Infant Food. Harry C. Algire.
155.— Alopecia. (*Concluded.*) L. Duncan Bulkley.
156.— Operation on Cervical Ganglia of Sympathetic for Epilepsy, Glaucoma and Exophthalmic Goiter. Emory Lanphear.
157.— Stitch Abscesses in Abdominal Incisions. Points in Regard to Their Etiology and Treatment. Frank H. Washburn.

AMERICAN.

1.—See abstract in our society reports, this week.
2.—See abstract in THE JOURNAL of May 5, p. 1133.
3.—See abstract in THE JOURNAL of May 12, p. 1194.
5.—See ¶ 1, above.

6. **Present Status of Rectal Surgery.**—Mathews calls attention to the neglect of the subject of proctology in certain surgical text-books and to some of the misstatements they contain. He notices the progress of the specialty of rectal surgery, but condemns the rushing into specialism of those who are not fully prepared by previous general practice. The society is not to be composed of men who devote themselves exclusively to this subject, but those who desire to become better posted in this class of cases. He suggests that it be annexed as a section to the AMERICAN MEDICAL ASSOCIATION, and that the rules be rigid in the admission of members.

7.—See ¶ 3, above.

8.—Ibid., p. 1193.

9. **Defense of the Organism.**—Meltzer maintains that the prevailing opinion of bacteriologists, who regard the defense of the body against hostile germs as due exclusively to a single element, whether it be alexins or leucocytes, is neither correct nor advantageous. He believes that it is not by a single tissue or a single function, but by concentrated action of independent factors that this defense is maintained, and illustrates this by the conjunctiva, which is usually sterile, notwithstanding its constant exposure. The causes of this are the reflex closure and blinking of the eyes and the bactericidal effect of the tears; similarly the respiratory organs, which are constantly invaded, are protected by the tortuous part of the upper portion of the tract, the action of the epithelial cilia, and the thinness of the epithelial layer, admitting the bacteria quickly to the lymph-glands, which take good care of them. Other defenses are the sphincter muscles at the entrances of some cavities of the body, and such secretions as tears, saliva, mucus, etc. Two new factors, however, which he thinks assist in the work of destruction of bacteria in the body, are proposed. One of these is plasmolysis. He attributes to different osmotic pressures of the fluids, the important part in this function. The second new factor is the heart's impulse. A certain maximum of vibration is indispensable to all forms of life, and can not be overstepped by any one. Every species has its certain individual minimum in this respect. He thinks that the vibrations emanating from an impulse of the heart probably form the optimum of the vibration for the living cells of each individual animal. Recent experiments have shown that the vibrations communicated through the body by the heart are deleterious to extravascular dead blood and the suggestion which he wishes to make is that those emanating from the heart-beat of the animal are more than a maximum for all the bacteria invading the interior of the animal body, especially in the injured state in which they are placed by the other influences of the body, for instance, by the plasmolysis. Thus, while we constantly live in a state of latent infection, as Adami calls it, it is not a foe to normal health or life, but is rather a confederate in their defense.

10.—See abstract in THE JOURNAL of May 2, p. 1193.

11.—Ibid., p. 1193.

12.—Ibid., p. 1194.

13.—See abstract in our society reports of this week.

14. **United States Pharmacopeia.**—Wood's address reviews the history of the Pharmacopeia and notices the fact that it is especially a book for the pharmacist rather than the medical profession. He congratulates the recent convention for revision on its success and the high standard it has maintained, and makes the proposition that the committee on revision should be divided into two parts, one to prepare and the other to publish the Pharmacopeia.

15.—See abstract in THE JOURNAL of May 12, p. 1194.

16.—Ibid.

17.—See ¶ 1, above.

18. **The Tropical Army Ration.**—Munson's article answers the question whether the present army ration is suitable for the tropical service, in the negative, and this involves the consideration of the physiology of hot climates, which is taken up. He finds that the body temperature in the tropics is elevated in new arrivals; the vital forces must frequently neutralize heat reception under external conditions to keep

the bodily temperature down toward the normal. This produces an alteration in the metabolism, and there is additional work for the kidneys and liver, for an excess of nutritive material which in temperate climates would be oxidized here requires to be excreted. The loss of weight occurs in hot countries as in summer in temperate climates. Loss of weight, provided the decrease is limited to the adipose tissue, however, may be considered as strictly beneficial. Tropical heat lowers the pulse-rate, and increases the respiratory capacity by making an alteration in the relative proportion of blood and air in the lungs. Respiration is diminished, perspiration increased and urinary excretion diminished. Through the loss of fluid resulting from increased perspiration, there is a diminished secretion of saliva, mucus, bile, gastric and pancreatic juices, and as a consequence there is dryness of the throat, weakness of appetite and improper digestion, gastric fulness after eating, and habitual constipation.

19 **Stricture of the Urethra.**—Of all the causes of stricture of the urethra, gonorrhea stands first, other disorders being various diseased conditions, non-gonorrheal inflammations and traumatism; this last stands second as a cause to gonorrhea, in fact, is relatively more frequent, but the number of cases of gonorrhea being so much greater than the number of cases of traumatism, those of gonorrheal stricture of the urethra are proportionately increased. In many cases, however, the etiologic factor is not discovered. It is possible that an abnormal state of the urine may produce the condition and that it may thus be accounted for in gouty or rheumatic cases. The constitutional disorder mentioned by Cumston is scrofula, though he does not credit it as a factor or believe in masturbation as a cause; calculi may be a cause, and may account for many rheumatic cases. The pathology of the condition and its symptoms are described at length and also the consequent bladder changes.

20. **Nitrous Oxid: Ether: Chloroform.**—Goldan insists on the necessity of not being too wedded to the use of any one anesthetic, as is too often the case. In many cases chloroform is preferable, as in acute pulmonary diseases, and in disorders of the circulatory system, since it lowers the blood-pressure and the chance of artery rupture is lessened. Where compensation has occurred, ether is to be advised. Alcoholic and drug habitués are better with chloroform, and it is preferable in obstetrics, though it is contraindicated if surgical narcosis is necessary, and particularly if hemorrhage is present. Chloroform should not be used at night as decomposition takes place when the vapor is brought into contact with an open flame, and the irritating vapors produced are dangerous. Ether can be used at night with safety if the light is above the patient and care is taken as to the inhaler and the container. In emergency cases, chloroform should not be used with the very young or the very old, and ether is practicable, if properly given in old or even young, where it has been claimed to be contraindicated. The after-treatment of the patient is important; he should be put in a bed that has been warmed, should be well covered, and have fresh air admitted to the room. Washing out the mouth with water in which there is a little lemon juice or peppermint will remove any unpleasant taste or odor from the ether. Vomiting should be encouraged, as it relieves the stomach of mucus and saliva. Of the various emergencies arising during anesthesia, the following are mentioned: a falling back of the tongue, which should be looked for; posture, which sometimes interferes; a valve-like action of the lips in very old persons, that sometimes interferes with respiration; spasm of the glottis, chest muscles or lower jaw muscles; vomiting, when loose teeth or particles of food are especially dangerous; insufflation of blood into the larynx, causing asphyxia. He speaks of performing tracheotomy before prolonged operations, and packing the pharynx with sponges as a safeguard against such accidents. In operations on children, for adenoids, etc., chloroform should not be used, as there is a danger of insufflation. In those cases where asphyxia occurs, artificial respiration should be practiced, the patient on the side and inverted, with the head extended. The dangers from the improper administration of the anesthetic are chiefly of the asphyxial nature when ether is used; direct paralysis of the respiratory function is rare, as is also the depression of the circulation. With chloroform, there may occur depression and paralysis of the vasomotor centers, great fall in blood-pressure, and more rarely, paralysis of the heart. The respiratory centers are only secondarily involved. Collapse from ether rarely occurs without the warning of a shallow gasping respiration, and small rapid, irregular pulse. With chloroform the most frequent symptom of danger is an ashy gray pallor, with a rapid failure of the pulse. The possibility of collapse occurring without warning is mentioned, though he thinks this rare. Artificial respiration, except in operations on children, for adenoids, etc., already mentioned, is best done by Sylvester's method, as inversion permits the blood to gravitate to the vital centers in the medulla. Rhythmic traction of the tongue, according to Laborde's method, is also described, as are also other methods for exciting reflex respiration. Of the drugs that may be used, alcohol is condemned and ammonia recommended; harm may be done to the respiratory apparatus if too much is given. Strychnin is given as probably the best circulatory and respiratory stimulant, but if improvement does not result after a fair-sized dose, no further dependence should be placed on it. Other drugs mentioned are atropin and digitalis though they are not especially recommended, and amyl nitrite, which is found to do more harm than good, when chloroform is administered, though it may be useful with nitrous oxid. Saline infusion is of the greatest value in the treatment of shock where much blood has been lost. The introduction of hot fluid into the colon, though not practiced to a very great extent, is one of the best methods of treating shock and urinary suppression and relieving thirst. Goldan is doubtful as to anesthesia ever being in itself the cause of pneumonia, it is due rather to faulty management. However, he does believe that nephritis or suppression of the urine may result from supersaturating with anesthetics. Paralysis following anesthesia may be due to faulty posture or apparatus, or to rupture of a blood-vessel from improper management.

21. **Modern Medical Conceptions.**—Coulter calls attention to the progress of medicine, as influenced by improved methods of instruction and the use of the microscope, etc., in building up scientific conceptions. He thinks the fact that so many specialties have progressed so far is evidence that other departments can also be put in the same advanced position.

22. **Tuberculosis.**—Russell's paper is a plea for dispensary treatment of the consumptive poor who are not able to go to sanatoria, but can be cured or helped by proper treatment. He thinks that in the early stages of consumption, by patient and long-continued treatment, many can be cured, all can be benefited, all so taught as to be capable of directing and teaching others. He believes that the proper establishment of these methods would break down the idea that consumption is in all stages incurable, and would lead to measures for relief in the early stages.

23. **Management of the Hair During and After Fevers.**—According to Jackson, during the illness we can do little or nothing, except keep the scalp in a good condition. If the patient is a man, that will be a comparatively easy task, but if a woman, it will be more difficult. As a rule, the hair does not begin to fall out until some six weeks or more from the beginning of the disease, then if the patient has recovered with her hair in a snarl and is under 15 years of age, the easiest course to pursue is to cut it off as short as necessary, but if she is older, or even in a child under certain conditions, the careful attention of the nurse will unravel the snarls. Then the hair should be combed and brushed daily, for only diseased hair can be brushed out, and the sooner that is removed the better. Once or twice a week a little pomade, containing a dram of precipitated sulphur to an ounce of good cold cream, should be gently worked into the scalp, or a 3 per cent. lotion of resorcin in oil and alcohol can be used. Once in every two or three weeks the hair and scalp should be washed, and the best kind of soap is a liquid one, such as the tincture of green soap. This should all be washed out and the best way to do it is to place the head under a full stream

of water as from a faucet. After washing the hair, it should be carefully dried and a little pomade rubbed into the scalp to take the place of the oil which has been removed. With this method the patient will regain all the hair she has lost and sometimes more, and be saved the discomfort of wearing a wig.

25. **Ether Anesthesia.**—Burrows would give four drams of sulphate of magnesium four hours before the anesthetic, and an injection of a quart of warm water an hour previous; he would restrict all food during the interval, with the exception of perhaps milk, and discontinue that at least four hours previous to the operation. He gives plenty of water, but empties the bladder before the operation, and removes false teeth from the mouth. He says there is no use of giving atropin prior to the anesthetic, which should be commenced gently, with irritation to the respiratory mucous membrane avoided by the gradual admixture of air. Stoppage of breathing in the early stages should not be considered alarming, but the inhaler should be raised and fresh air allowed to strike the nostrils, using a little ether on the chest to help start breathing at once. Plenty of ether is to be used in the early stage, but mixed freely with air, and we should watch the pupils, and if they are dilated widely and irresponsive to light, look out. Always keep the patient thoroughly anesthetized, watch the tongue, and if necessary use tongue forceps. Withdraw the ether occasionally and allow a few breaths of air. Be sure and keep the patient warm. If shock has been considerable, give a hypnotic of 1/30 to 1/15 grain of strychnin and do not leave the patient until reaction begins.

27. **Ophthalmic Memoranda.**—DeBeck's paper considers the medicolegal cases in eye surgery, which are not common, but do sometimes occur and are of importance. He mentions several interesting suits for malpractice, some of which are due to fraud, and also suits for services rendered. In one case of ophthalmoplegia an agreement was arranged by which he made an examination under the joint auspices of both parties and submitted a report to each. The result was a mutually satisfactory compromise, and he thinks this an ideal way of obtaining expert testimony.

28. **Mould in Stomach.**—Einhorn reports four cases in which he found spores and mycelia of fungi abundant in the washings of the stomach. These organisms do not find favorable soil for their development in the normal stomach, and any considerable growth would not be possible unless a colony had become so firmly adherent that it had not been carried along with the onward passage of the chyme. It is improbable that any considerable surface of the stomach can be thus occupied and yet be unattended by disturbances of the functions, though it is not easy to say exactly how this may occur. In his cases Einhorn found the mould formations in two groups of gastric affections: 1, in cases of excessive hyperchlorhydria occasionally attended with hypersecretion and vomiting; 2, in gastralgia with normal or reduced gastric secretion. In some of these cases lavage, followed by spraying with a weak solution of nitrate of silver, caused a disappearance of the mould flakes and a subjective improvement in the condition of the patient. He thinks, therefore, that it is probable that mould fungi are connected to some extent with the above-mentioned conditions, and from a therapeutic standpoint, it is therefore desirable to free the stomach from these moulds, and this is best done by irrigation in the fasting state, followed by a spray of an antiseptic solution of silver nitrate, 1-2 per 1000. Otherwise the treatment of these cases must be directed in accordance with the special disease present.

29.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1424.

31. **Tricuspid Regurgitation.**—Huntington finds his experience at variance with text-books for, in his examinations, he discovered a large number of tricuspid regurgitations accompanied by conditions more or less abnormal. It is usually described as rare, and yet a certain amount of regurgitation at that valve is said to be normal. He discusses the subject at length and objects to the conclusion that there is a normal regurgitation, on anatomic grounds. He thinks that the structure of the columnæ carneæ shows that the valve has an automatic safety action and does not depend on a defect for its salvation.

33. **Eye Strain.**—Satterwhite's paper is a plea for the relief of various conditions, epilepsy, insanity, insomnia, etc., by operation for eye strain. He reports one or two cases that indicate the value of this method.

34. **Nephritis in Childhood.**—After a historical introduction, Moncorvo reports a number of cases of nephritis complicating malaria that he has found in his experience, which he thinks goes to prove that in cold or temperate climates, malaria plays the same part in the production of nephritis in the young, as does scarlet fever. The disease is of short duration and generally favorable in its outcome. Edema is sometimes extensive and the secretion of urine more than usually diminished, while albuminuria is almost constant and hyaline cysts are also present. As regards its pathogenesis, he suggests the theory of an antitoxin from malaria parasites.

35. **Care of Feeble Infants.**—Ransom makes the statement that allowing 15 per cent. of the children in the United States born to be either premature or feeble, we have 420,000 of them annually, and he details caring for these infants by incubators, etc., that can be improvised in the poorer homes.

36. **Tuberculosis.**—According to Gardiner, the reasons why tuberculosis spreads more rapidly among cattle than the human race, are: 1. A normal temperature nearer to that which is most favorable to the growth of the germ. 2. Generations of in-breeding of milk cattle. 3. Local stable conditions favorable to ready contamination.

38. **Etiology of Beri-beri.**—Ashmead discusses and disputes some of the theories in regard to the origin of beri-beri, which he attributes not to a germ, but to carbonic acid poisoning. He thinks it is a peripheral "neuritis and myelitis of the extremities and of the heart, dropsy following by osmosis through the paralyzed coats of vessels. Dangerous symptoms are respiratory and heart complications, gasping for breath, cyanosis, vomiting, etc. Evidently the pneumogastric nerve is implicated. The best treatment is transplantation to an altitude, fresh air, oxygen by tank, and diaphoretics, and diuretics. Hemoglobin being deficient in every case of beri-beri, and the red corpuscles being always normal, prove that the disease is not caused by insufficient alimentation."

45.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1421.

47. **Pneumothorax.**—From an analysis of fifty-one cases examined in the Boston City Hospital during a period of eighteen years, Morse concludes that pneumothorax is an uncommon condition, and that at least 70, and probably 85, per cent. of the cases are tubercular. In non-tubercular cases the prognosis is good when it is due to trauma, and fair when secondary to pulmonary abscess. The results of rib-excision in these cases are very encouraging. Tubercular pneumothorax is most common in males, is most frequent in the third decade of life and occurs about twice as often on the left as on the right side. The onset is acute in less than one-half the cases, and sudden pain with dyspnea is the most common initial symptom. Pneumothorax may be the first sign of tuberculosis. Displacement of the heart always occurs, being most marked in left-sided cases. Pneumothorax is usually complicated by the presence of fluid. Air is rarely present alone in patients living more than a week, and the fluid is more often purulent than serous. About 15 per cent. may recover, but they are practically all serous, and usually die later from pulmonary phthisis. Pneumothorax is a direct cause of death in 60 per cent.; and 80 per cent. die in less than a year, while only 10 per cent. live over five years. The prognosis is worse when the pneumothorax is right-sided or when it is purulent rather than serous, and when found in women. Surgical intervention is at least worthy of consideration in purulent cases. People with these disorders are sometimes able to be up and about, and often able to work.

48. **Acute Pneumonic Form of Tuberculosis.**—Elting details cases with pathologic findings. There were fibrous exudates filling up a large part of both lungs, and necrotic foci in the older portions. The latter were found also in the liver,

though neither tubercle bacilli nor any other bacteria were found in connection with them. They are, he believes, the result of the direct action of the toxin. The main clinical features of the disease are onset very often without chill, though it may occur; fever, often of an elevated character, but very frequently irregular or remittent and practically always the latter in advanced stages; an absence generally of marked dyspnea and cyanosis; physical signs; consolidation of greater or less proportion of the lung; pain in the side, with cough and sputum, which is at first typically pneumonic, but at the end of a week or ten days may assume a greenish tinge, and containing tubercle bacilli. In the cases reported they were found seven days after the onset.

49. **Senile Bronchitis.**—Wilcox describes and discusses the degenerative condition of old age and the pathology of senile bronchitis. Bronchorrhea with senile cough is common and passes often so rapidly and imperceptibly into active bronchitis that the patient is taken by surprise. Chilly sensations, general malaise, increase of cough, local pain, may all be wanting, but the increasing purulency of the sputa and the high rectal temperature and duskiness of the face show that bronchitis is present. The auscultation and percussion signs may also be insignificant. The diagnosis from pneumonia is made largely by the physical signs and the general prostration, but it is not always easy to distinguish it from tuberculosis. Sometimes only the post-mortem will establish the diagnosis. The tendency is for the condition to become chronic, as it can not be cured unless we can say that we can cure old age. The drugs in which he puts most confidence are ammonium carbonate and strychnia. The tissue conditions should be looked after and massage is often useful. The points as summarized are: 1. Careful diagnosis. 2. Use of strychnia and ammonium carbonate. 3. Prohibition of opium. 4. Systematic massage, especial attention being given to the chest. 5. Improvement of the general health.

50. **Neurofibromata of Nerves.**—Keen and Spiller report a case of multiple neurofibromata of the ulnar nerves, illustrated by elaborate drawings of the pathologic conditions. Spiller reviews the literature of the subject and refers especially to the possibility of degenerative malignant change in the tumors.

51. **Ectopic Gestation.**—Three cases of ectopic pregnancy are reported by Davis, and the diagnosis briefly discussed. He believes that shock referred to the abdomen, occurring in a woman capable of pregnancy, should always occasion a suspicion of this condition, though no tumor be found and the signs and symptoms be obscure; if the shock be pronounced, the abdomen should be opened and the condition present be diagnosed and treated. In one of the cases here reported the absence of shock was the only thing which made him doubt the diagnosis.

52.—See abstract in THE JOURNAL of March 17, ¶ 688.

53. **Plague.**—Clemow concludes his article on the clinical aspects of plague, by giving the manifestations of the disease. He calls attention to the varying character of different epidemics, as for example, the recent serious recrudescence of the disease in Poona during the monsoon, something entirely contrary to its behavior in previous years, there or in any other part of India. The disease, however, is unquestionably connected with, if not solely caused by, the entrance of specific bacilli into the body, and the subsequent production of specific toxins which, circulating through the tissues, produce the varied general and local symptoms. The toxins appear to have a special and early action on the brain and nerve structures. They are primarily nerve poisons, and the affections of other organs are, to a very great extent, perhaps more than is generally thought, due to the profound disturbance of the nervous mechanism that controls their action and nutrition.

61. **Puerperal Sepsis.**—The points of Polak's paper as summarized by him are: 1. Puerperal sepsis usually begins in one of two forms of endometritis, i. e., putrid or septic, except when the infection has been direct through the inoculation of lacerations and abrasions by the streptococcus or by the tetanus or diphtheria bacillus. 2. While the curette is indispensable to the successful management of putrid endometritis, it is harmful in an empty uterus, such as is commonly found in the septic form. 3. All forms of septic infection are benefited by general stimulation and supportive treatment. 4. Of the antitoxins used, unguentum Credé has proved its superiority over the antistreptococcic serum. 5. Blood-washing and artificial production of a hyperleucocytosis are valuable adjuncts to the routine treatment. 6. Hysterectomy, postpartum, should be limited to those cases in which the sepsis is localized, as a metritis with pyosalpinx, or tubo-ovarian abscess, after the acute symptoms have somewhat subsided. Finally, the most parametric pus collections can be more safely handled by vaginal section.

62. **Carcinoma Uteri.**—Boldt reviews the methods employed for the palliative treatment of uterine carcinoma and concludes that curetting and the actual cautery are the best therapeutic methods for the treatment of this condition.

70. **Intrauterine Implantation of the Ovary.**—Dudley reports a case in which he had performed a double ovariotomy, and in order to preserve the function he took the right ovary, cutting away the portion which rested against the pyosalpinx, and planted it within the uterus, fastening it there with fine silk sutures, then closed the uterus, which he dropped back into the pelvis. The patient made a good recovery, and menstruation continued, but as she is an unmarried prostitute he does not look for pregnancy in her case, but he will in future watch for such cases, hoping to find a case of pregnancy following such a procedure.

71. **Heat in Pruritus.**—Andrews calls attention to the value of heat as a cure for intolerable pruritus, especially in those forms occurring in connection with chilblains, and in the anus and adjacent organs. As a historical fact of interest, he shows that the first Napoleon used this method to relieve a distressing pruritus of the thigh, and mentions the case of an old farmer who had made the discovery independently in his own case. The later authorities are beginning to recognize the value of this agent, but he thinks it should not be depended on too exclusively, though it is a powerful source of relief.

84. **Typhoid Fever.**—Wilson's article is a report of an experimental therapeutic study of the treatment recommended by Aulde, for typhoid fever, in which he advises the use of nuclein and copper arsenite. The results with this method are not favorable, and he thinks Aulde's assertion that typhoid fever can be brought to a favorable termination in from three to five days by this method is absolutely without support.

85. **The Alleghenies for the Tuberculous.**—Spangler points out the climatic and other advantages of the Allegheny region for the treatment of tuberculosis, and shows a climatic meteorologic table. He pleads for legislative interference to preserve the forests of this region and endowments for public sanatoria there.

86. **Pulmonary Tuberculosis.**—The measures recommended by Forrester for the prophylaxis and management of phthisis are: The regulation of marriage of consumptives, the legal checking of indiscriminate expectoration, regulation of possible tuberculously contaminated foods, proper clothing, early care of catarrhal troubles of the respiratory tracts, outdoor occupations, fresh air, plain nutritious diet, etc. He appears to indorse Mays' theory of the neurotic origin of the disease and the value of silver nitrate injections.

94. **Relation of Uric Acid to Migraine.**—Lichty reports the results of his studies of the urine, with especial reference to uric acid and urea in their relation to migraine. For the estimation of urea, Liebig's method was employed, and for uric acid the method of Hopkins, modified by the use of a decinormal solution of sulphuric acid with methyl orange as an indicator, instead of titrating with the unstable potassium permanganate solution. When the headache began, the patient was instructed to save the urine in separate vessels during the entire period of the attack, and that voided at the time of the greatest intensity was examined, as was also that specimen collected as soon as the headache disappeared. Several times examinations of two urinations during the attack were made, and also one or more similar examinations in the interval be-

tween the attacks. From these studies, carried on during the past three years, it was found: 1. That both uric acid and urea were diminished during the height of the headache, but their own relation was not disturbed. 2. That after the headache, the urea increased to about what it was between the attacks; while the uric acid increased much more, thus changing the former ratio. These results do not agree with the uric-acid theory of migraine, but the control experiments made by Lichty seem to confirm them. He found that the uric acid wave associated with migraine does not appear for some hours after the culmination of the attack, and that, therefore, this increase of uric acid is to be taken as the effect rather than the cause. By careful chemical analysis, he finds that there was no excess of uric acid in the blood during the attack of migraine, and that in some cases there was even a slight increase of alkalinity.

96. **Curability of Nervous Diseases.**—Punton finds that practical knowledge and experience prove conclusively, that when the two great classes of nervous diseases are compared, irrespective of their seat, the organic diseases are well-nigh incurable, while the so-called functional disorders are in most part curable if recognized early. While there are some exceptions to this rule, its general validity can not be disputed. He notices the views of different individuals on this question, such as, for example, claims that epilepsy is curable, which he rejects.

97.—See abstract in THE JOURNAL of April 21, p. 1005.

102.—See abstract in THE JOURNAL of April 14, p. 934.

103. **Diagnosis of Pneumonia.**—Several cases are reported by Behrens, which show the difficulty of making an immediate diagnosis of pneumonia, the symptoms and physical signs being obscure. He emphasizes the following points as important in making the diagnosis in non-typical cases: 1. Be in no hurry to pronounce a case pneumonia of special type unless you have examined the patient thoroughly, both as regards objective and subjective symptoms. 2. Remember that no sharp line exists between the ending of a severe bronchitis and the beginning of capillary or catarrhal pneumonia. 3. Depend always on a physical examination as being of the most importance. 4. Children under 6 years have, as a rule, capillary catarrhal pneumonia; 6 to 16, croupous or catarrhal; adults, lobar pneumonia. 5. Do not lose sight of chest exploration, if peculiarities arise in continued fevers.

111. **Latency or Cure of Pulmonary Tuberculosis.**—Von Ruck points out the possibility of latency of phthisis, and insists on the necessity of treatment and testing of cases by the tuberculin reaction before they are pronounced cured. Patients that have been treated by tuberculin preparations can not properly be tested at the discontinuance of treatment, but six months later would give a sufficient interval to make the test of value.

118. **Diaphoresis in Pneumonia.**—In the *Medical Register* for Aug. 15, 1897, Miller reported the use of wrist heat for producing diaphoresis in the treatment of pneumonia. Since that time he has successfully used the treatment in a number of cases with uniform good results ,with one exception. "The method of application of the wrist heat is to heat several bricks (six will usually suffice) in the oven and then thoroughly saturate them with boiling water, after which they are to be wrapped in cloths, preferably flannel, and placed about the patient. Sweating must be kept up from two to forty-eight hours, relief of pain being a most valuable indication for discontinuance. The bricks may be removed from time to time by carefully withdrawing them one at a time, and replacing each as removed by a new one prepared as above. Patient's clothing and bed-clothes should not be changed until thoroughly dry." Several cases are reported.

127. **Babinski's Symptom.**—According to Wood, the toe reflex can not be relied on as a basis for diagnosis. He has studied it in children and adults, and has not been able to corroborate the statement of Collier, as to the correctness of the original claim of Babinski, who held that there are two distinct forms of the plantar-reflex, one of the normal adult, and one of the child; and that in certain cases of disease, a reversion of the former reflex occurs in the adult so that it is possible to make a diagnosis as to the seat or even the nature of the disease by this symptom.

128.—See abstract in THE JOURNAL of May 12, ¶ 46, p. 1185.

140. **Yellow Fever.**—Carter has analyzed the cases of yellow fever that have occurred in two Mississippi towns, with the special object of ascertaining the regular interval that must elapse between the development of yellow fever in non-infected places, and the development of that contracted by infection. The points involved are, the time from the development of the infecting case until that of another, plus the time the individual in question was exposed to the environment before he contracted the disease, plus the time from the contracting of the disease until its development. He thinks there is much evidence that is usually in, or not sooner than, the third week that the secondary case develops. There is no definite time limit that may be called the situation of "safe" or "unsafe," but hope of safety increases with the passage of the third week and the lapse of time after this. The first group of cases infected from the initial case occurs generally in from two to three weeks. These form new foci, the original ones remaining active; and in two or three weeks more a fever should be "scattered" in tertiary foci, just beginning. Prior to this it is found only in those who have had a common exposure, seldom in more than from four to eight places.

141. **Heroin.**—Floeckinger has used heroin at first in 1/6-grain doses, but with this he noticed gastric disturbances in several cases. Since then he has used it only in 1/12-grain doses, and he has found that the hydrochlorid is admirably adapted for hypodermic injection. The dose is from 1/24 to 1/12 grain, whether given hypodermically or through the mouth. He does not think one is liable to become addicted to the use of heroin, as its narcotic effect is so much inferior to that of morphin. In conclusion he says that we possess in heroin an excellent sedative of the respiratory tract, which is devoid of the narcotic effect of morphin or codein and, therefore, in physiologic doses is entirely uninjurious.

143. **Gall-Stones.**—Cordier considers that cholelithiasis is of frequent occurrence and is usually accompanied by symptoms. Cholesterin as a gall-stone-producing agent must be present in an abnormal quantity, for it is largely a product resulting from the destruction and disintegration of the epithelium of the biliary ducts and gall-bladder. Bilirubin-calcium, an insoluble compound of bilirubin and the lime salts is a nucleus of all stones found in the ducts and the majority of those formed in the gall-bladder. Jaundice, ptomain poisoning and suppuration are late symptoms, while dyspeptic ones, swarthy skin, uneasiness in the region of the gall-bladder, and loss of weight are some of the remote and local ones. The most direct causative factors are inflammatory diseases of the duodenun and bile passage. While some patients get well without medical or surgical assistance, the physician can greatly aid the progress. The surgery is especially difficult and should not be undertaken by the inexperienced. A ball-valve stone continuously gives rise to symptoms until surgically removed, and when septic ones occur from gall-stones surgery is required.

144. **Fracture of the Ankle and Elbow.**—Ochsner calls attention to the fact that in a very large proportion of cases there is painful ankle-joint following Pott's fracture, due to the foot being in the equinus position, and resulting from the position in which the foot was fixed when the fracture was first treated. This is nearly always in an obtuse angle to the leg, and the gastrocnemius muscle is in a condition of tension. He would remedy this by putting the leg in a flexed position with relaxation of *this muscle*. To obtain a good result we should always place the foot at a little less than a right angle. In the treatment of fracture of the elbow-joint one of the most common difficulties is a partial ankylosis, especially in children, and the best result he has had in the treatment of this condition is obtained from encouraging the use of a wheelbarrow, something a child will enjoy, and that will cause a spontaneous straightening of the arm.

FOREIGN.

British Medical Journal, April 20.

Acoustic Principles Affecting Conduction of Sound by Bones of Head. ALBERT A. GRAY.—The object of the author's investigations was to find out the acoustic principles on which the tuning-fork tests depend. The fact that the same results can be produced by apparently opposite means in these tests gave rise to certain questions which he sought to solve. His experiments were made on an individual who was unacquainted with the principles involved, and by means of a probe introduced through the meatus against the drum membrane, and by gently pushing it forward against the handle of the malleus and other portions of the drum membrane the sound of the tuning-fork was modified. It was found that inward pressure of the outer parts of the membrane and of the manubrium produced opposite results, and the author accounts for it by the anatomic arrangement of the muscular fibers. The normal position of the drum membrane is slightly depressed in the center, like a funnel, with its apex pointing inward and its convex sides outward. When pressure is applied to these convex sides the radiating fibers will be relaxed and the circular ones become tense. When this occurs the former fibers become worse conductors of sound and the latter better ones, because the increased tension of fibrous substance produces increase in its sound-conducting power, and vice versa. So when pressure is brought to bear on the convex surface of the membrane, the radiating fibers are relaxed and the intensity of the sound conducted by the hammer is diminished. When, however, the probe is applied to the handle of the hammer, the results are different. The apex of the funnel is pressed inward and the tension of both sets of fibers, circular and radiating, makes little or no difference because the paths for the conduction of sound are the radiating ones. The latter are tenser than *when* the membrane is in a normal condition and the sound is conducted with less loss to the ossicles and thence to the labyrinth. The manner in which the atmospheric pressure causes alteration in the tension, however, is peculiar. Were the membrane equally strong in all parts and not attached to the ossicles, when the atmospheric pressure was increased or diminished the movement of the membrane would be greatest at the middle. Now after very slight increase of pressure of air this is true; the tip of the handle of the hammer and center of the membrane move more than the outer parts, which causes an increase in the tension of the radiating fibers and hence increase in the subjective intensity of the sound conducted by the bones of the head. This explains the fact that if the finger is inserted in the meatus the duration of sound is increased by better conduction. If, however, the finger is pushed forcibly into the meatus, the movement of the center of the membrane and the handle of the hammer soon stops, partly because the ligaments of the ossicles come into play, also because the cog at the head of the handle catches on the incus and further movement inward is prevented or greatly diminished. The cause of the changes in the bone production when the air is condensed in the meatus seems, therefore, to be this: At first, under very slight increase of pressure, the center of the membrane with the handle of the hammer is drawn slightly inward, while the remaining parts of the membrane increase their convex form; this increases the tension of the radiating fibers, and hence their sound-conducting power; so with very slight increase of pressure of the air, increased intensity of the sound conducted by the bones is produced. If, however, the pressure is increased to more than a slight extent, the center of the membrane remains stationary while the convex surfaces of the membrane become flattened; hence relaxation of the radiating fibers occurs, and diminution in the intensity of bone-conducted sound takes place. The practical applications of the investigation to the test of hearing by better conduction in the deaf, and the experiments which have been made with the view of ascertaining the part played by the tympanic membrane in the generation of different tones will be published later.

The Lancet, April 28.

Case of Pernicious Anemia Treated by Antistreptococcic Serum. WILLIAM ELDER.—The writer reports a case of this affection in a man, 35 years of age, who had suffered much from defective teeth. He presented all the symptoms characteristic of pernicious anemia. The blood test, two days after admission into the hospital, gave 797,500 red corpuscles, hemoglobin 24 per cent., leucocytes 4520. The treatment was a thorough disinfecting of the mouth, 5 gr. of salol and 15 gr. of bismuth salicylate internally every six hours, and 10 gr. of antistreptococcic serum injected into the subcutaneous tissue, every second day, the total amounting to eighteen injections up to March 19. This, with the exception of an occasional hypnotic and laxative, constituted the whole treatment. Improvement was rapidly progressive. On March 20, forty-five days after the commencement of treatment, the blood was practically normal, red blood-corpuscles 4,800,000, hemoglobin 104 per cent. While it would be a mistake to draw very decided conclusions from this one case, Elder thinks that it is suggestive and believes this form of treatment worth a further careful trial in pernicious anemia.

Cysts of the Breast; Their Relative Frequency, Diagnosis and Treatment. THOMAS BRYANT.—From his experience the author concludes that cysts of the breast are far more common than generally supposed, and that they are chiefly found in women during the same period of life as that in which cancer occurs. They are mostly amenable to local treatment without the sacrifice of the breast glands in which they are situated, and there is no reason to believe that women who have these cysts are more prone to cancer than those who do not have them. He carefully analyzed his notes of cases, and found that they suggest the conclusion that out of every four cases of tumor of the breast more or less simulating cancer, one at least will be cystic or of a simple nature. He thinks these are originally involution cysts in most cases. Their diagnosis may not always be easy, especially when in a middle-aged woman with a hard, slow-growing lump in the breast, and without any history of influence of lactation or any inflammatory breast condition. A careful medical examination should be made and, if the surgeon's sense of touch is keen enough to detect elasticity in the swelling, or even fluctuation, the diagnosis of cyst may be hazarded. If a clear serous fluid can be made to flow from the nipple, by manipulation or pressure on the tumor, the probability of the cyst being a simple one is much enhanced. If the fluid is brown or blood-stained the possibility of intracystic growth of some kind is suggested, and if more like pure blood, the presence of a soft solid growth, sarcomatous or carcinomatous, should be feared.

Strychnin as a Factor in Causing Cerebral Hemorrhage. LACHLAN GRANT.—The author calls attention to the importance of cautioning elderly patients with arterial defects against drugging themselves with tonic syrups and tabloids containing strychnia. On account of the danger of producing arterial rupture in the brain special care should be taken by the physician in administering strychnia to patients who have reached the degenerative age, especially in cases of cirrhotic Bright's disease, chronic gout and syphilis, or where the patient has thickened or tortuous blood-vessels, or even where there has been an hereditary tendency to apoplexy.

Revue de Medicine (Paris), March and April.

Liver in Scarlet Fever. H. ROGER.—This author has found that the alterations noted in the liver in scarlet fever are most extensive in the subacute cases. Fatty degeneration is the lesion most frequently observed. The organ usually appears enlarged, pale, marbled and crowded with leucocytes, while the cells degenerate. These alterations vary in intensity, and in one case of death after a month of scarlet fever nephritis, the liver seemed to be almost normal. The clinical manifestations of these hepatic lesions offer an interesting field of study.

Semaine Medicale (Paris), April 18.

Benedikt's Syndrome. GILLES DE LE TOURETTE AND JEAN CHARCOT.—The syndrome described by Benedikt, paralysis of the third pair with crossed hemiplegia and tremor, is easily diagnosed, the tremor differentiating it from Weber's syndrome, which it most resembles. With an unpublished ob-

servation found in Charcot's papers and two personal cases, the writers were able to collect only six observations on which to found their study of the affection, including Benedikt's three. It commenced at the ninth month, or fourth, sixteenth or thirty-sixth year: gradually, with a premonitory cephalalgia for a year, or suddenly, with ictus inducing coma for three days. The hemiplegia is the ordinary spasmodic form, and may vary in intensity. The tremor may appear with it or not until a year or two later. The symptoms were doubled in one case, producing a dual syndrome. One case terminated fatally in four months, a child of 4; in another—a young woman—the affection has remained stationary since infancy; in a third—a negro, 39 years old—the syndrome has gradually increased in intensity since its sudden onset sixteen years ago. Benedikt attributes the syndrome to a lesion in the peduncle of the cerebrum near the nucleus of the motor oculi, where this nerve emerges, and he was able to establish its existence in one case by an autopsy. The motor or pyramidal fibers entering the peduncle may be affected "by continuity or contiguity" of the lesion, and to this the tremor must be ascribed, and the variability in its nature, although it has the constant characteristics that it is exaggerated with the voluntary movements and ceases during sleep, but otherwise may suggest the tremor from sclerosis in patches or paralysis agitans, hemichorea or hemiathetosis, with and without abolition of the reflexes. The character of the anatomic lesion seems to be immaterial; the localization in the peduncle at this point is the essential factor of the syndrome.

Grece Medicale (Syra), March.

Apyretic Disturbances of Temperature. TRIANTAPHYLIDES.—A number of tests on 130 subjects in health and apyretic disease, instituted by the writer at Batoum, differed in their results from the dicta of the text-books. He found that the normal temperature varied from one subject to another by more than a degree, but that it was more or less constant in each one. Healthy persons with subnormal temperature (35.8 or 36C.) are not rare at Batoum, and inquiry usually elicits malarial antecedents, unless the hypothermia is due to age or a recent disease. In such cases fever might be masked by the habitual hypothermia and a considerable elevation of temperature fail to be recognized on this account. He reviews the disturbances in the calorification in 101 cases of typhoid fever, 81 of pneumonia, and numbers of other diseases, and concludes that the calorification is one of the organic functions most frequently disturbed by affections which in one way or another touch the entire organism, and that affections in which the calorification is disturbed have a much more serious prognosis than others in which it remains intact. Regulation of the calorification is frequently a sign of a favorable issue.

Berliner Klinische Wochenschrift, April 2 to 23.

Toxicity of Thyroid Alimentation.—In the tests reported, dogs fed with fresh thyroid glands showed besides the usual phenomena a levulosuria amounting to .5 per cent, which persisted several days after discontinuance of the thyroid feeding.

Apparato-Therapy. P. JACOB.—This communication from v. Leyden's clinic extols the remarkable benefits that may be derived in long-seated paralytic affections of the central nervous system by the judicious use of apparatus, either to substitute the function of the paralyzed muscle or group of muscles, to assist and reinforce a partially disabled muscle, or to assist and reinforce the sound muscles to compensate the disability of the others. Two instructive observations are described, one a woman of 33 years of age, who could neither walk nor take hold of anything on account of spontaneous juvenile atrophy of the feet and hands. In the other, myelitis luetica had rendered the patient helpless. This latter case was improved by dural infusion of a solution of iodin, and function practically restored to the members by gymnastic exercises while lying on a hammock in a bath, exercises absolutely impossible in such cases without the support of the water.

Water-Secreting Power of Kidneys. G. KOVESI.—In this study, made at Koranyi's clinic, of the disturbances in the water-secreting power in generally diseased kidneys, Kovesi found that certain important facts might be learned by combining a dilution of the urine, by copious ingestion of water, with the determination of the freezing-point. The lowering of the freezing-point of the urine in renal affections depends on three conditions: 1, on the localization and the degree of the morbid process, which together determine the extreme limits of the variability in the concentration of the urine; 2, on the amount of water ingested, and 3, on the permeability for solid molecules still retained by the kidney. The quantity of water which when ingested produces urine isotonic with the blood, may vary with each case. When the nephritic subject drinks this amount, the kind of renal affection from which he is suffering will have no influence on his urine. If he drinks considerably more than is required to produce this isotonic urine, then, in case of parenchymatous nephritis, the urine will be much more concentrated than in case of contracted kidney. If he drinks less than this special quantity, the freezing-point of the urine falls much lower in case of contracted kidney, while it scarcely varies with parenchymatous nephritis. Tests on twenty subjects with normal or generally diseased kidneys have established several points and thrown light on others. Each drank 1.8 liters of Salvator water during the noon hour. Study of the urine then showed: 1. That by determining the lowering of the freezing-point and the quantity of urine eliminated during the twenty-four hours, the amount of molecular diuresis can be ascertained and in pronounced cases molecular oliguria be recognized. 2. That by determining the freezing-point of the blood it can be ascertained whether the molecular diuresis is sufficient for elimination of the molecules capable of passing into the urine, formed during metabolism. If the molecular diuresis is insufficient in proportion to the metabolism– corresponding to the diminished permeability of the diseased kidneys for solid substances—then the freezing point of the blood becomes lower. 3. Hyposthenuria indicates diminished water-absorbing power on the part of the kidney. 4. The more or less negative result of the "dilution test" indicates a decrease in the water-secreting power. The tests showed that the water-secreting power in the kidney is diminished in parenchymatous nephritis in proportion to the severity of the lesion, while it is retained to a greater or less extent with contracted kidney, as also in renal affections due to heart troubles. Congested kidney, in the tests, behaved like a transition form between chronic parenchymatous nephritis and secondary contracted kidney.

Centralblatt f. Inn. Med. (Leipsic), March 31 and April 21.

Rendering a Toxin Harmless. E. V. CZYHLARZ.—The German title to this article, "Entgiftung," means, literally, "disintoxication." The experiences related were made in the course of studies to determine the power possessed by the various organs, to render a toxin innocuous for the organism. A ligature was placed on the hind leg of a guinea-pig above the knee and a fatal dose of strychnin injected below. The ligature was removed after one to four hours, and none of the twelve animals showed a trace of intoxication at that time or later. Others succumbed as usual to strychnin intoxication if the ligature was removed in a half hour, but an hour's interval before removing it was sufficient to save the animal from the toxic effects of the drug. Czyhlarz attributes these results to a binding or neutralizing of the strychnin in some manner by the living subcutaneous cellular tissue, muscles and blood and lymph fluids.

Intervals Between Feeding Infants. A. KELLER.—The writer states that five meals in twenty-four hours are sufficient for infants, and no more are allowed at the Breslau children's clinic. At the same time he has established that the absorption and retention of nitrogenized substances and phosphates is not influenced by the length of the interval between feeding. Consequently chemical tests are no criterion by which to regulate an infant's feeding-time.

Deutsche Medicinische Wochenschrift (Leipsic), April 26.

German Malaria Expedition. R. KOCH.—In this third

report Koch describes the results accomplished during January and February in German New Guinea, where he discovered 157 cases of malaria among 734 persons, while he was unable to discover more than 30 cases in five weeks at Batavia. He includes in his list only those in which the presence of the malarial plasmodium could be demonstrated. On a large plantation 12 of the 21 Europeans were affected; 26.3 per cent. of the 240 Chinese laborers; 25.3 per cent. of the Malays; 10.9 per cent. of the Melanese. Among 217 natives examined, he was unable to find a single case of malarial infection in the 154 who were over 10 years of age, and only four between the ages of 5 and 10. But 80 to 100 per cent. of the children under 2 were affected, and over 40 per cent. of those between 2 and 5. "The only means, therefore, of establishing the absence of malaria at a place is investigation as to the children." No cases were found among those at the mission station on an island off the coast, but all were over 2. The form of malarial infection among the children was, in 29 cases: tropical fever in 18, tertian in 5 and quartan in 6. Among the 157 adults it was: tropical in 65, tertian in 20 and quartan in 73. The gradually acquired immunity of the natives after early childhood is apparent from this research, both in Java and in New Guinea. The results of the author's investigations are tabulated and show that elevated regions are certainly more exempt from malaria than low-lying regions, although this is not an invariable rule. There was no malaria to be found, for instance, at Soekaboemi, which is about 1809 feet above the sea, although four different varieties of anopheles were discovered in considerable numbers. On the other hand, at Bandoeng, which is at an elevation of about 3280 feet, over 40 per cent. of the children under 1 year old were affected, and over 14 per cent. above this age.

Pathology of Bronchial Asthma. A. FRAENKEL.—The mucous nature of Curschmann's spirals seems definitely established by the post-mortem findings reported by Fraenkel in two fatal cases of bronchial asthma. The anatomic findings are not always the same, but the morbid process, whatever its nature, seems to be restricted to the more delicate bronchial ramifications. There is, however, one constant bond between all the cases, that is, the abundant desquamation of the epithelium. It is impossible for us to understand the modus operandi of the process which in one case causes the shedding of such abnormal amounts of epithelium in the bronchioles that the lumen is almost completely occluded, while, in another, the mucus-producing capacity is augmented to excess and a peculiarly tenacious mucus is secreted, leading to coagulation and spiral-formation. The only possible assumption is the influence of the nervous system, differing in individual cases, on the vascular and secretory apparatus of the bronchial mucous membrane. The central threads in the spirals are most probably, he thinks, long-drawn-out cell bodies from the ciliated epithelium, around which the mucus accumulates.

Treatment of Obesity. W. EBSTEIN.—Starvation and courses at watering-places to reduce obesity are not the proper methods to pursue, acording to Ebstein. He would have the entire life altered to one of self-control: three meals a day, ceasing to eat at the first indication of satiety, food restricted to about 1300 calories for a man weighing 70 kilos; for breakfast, tea without milk or sugar, and 50 gm. of bread with plenty of butter; for dinner, soup, 120 to 180 gm. of roast meat with cabbage and green vegetables, salad, baked fruit without sugar, and fresh fruit, no turnips, parsnips nor potatoes; for supper, one egg, fat ham, smoked fish, 30 gm. of bread with plenty of butter, a little cheese and fresh fruit. This menu is agreeable to most persons and the appetite can be still further appeased by giving a large place in the menu to vegetables free from carbohydrates. Children of parents with a tendency to obesity should be watched over and not allowed to get into habits that would induce it. This rational, life-long treatment of obesity is also applicable to gout, diabetes, etc., and keeps the subject well and energetic. A good test of the amount to be eaten at a meal is whether one returns to work with zest after it. Milk and the products of milk are allowed when much craved, and the effort is made to substitute the albumin of vegetables for that of meat as far as possible. No naps are allowed after meals.

Mittheilungen a. d. Grenzgebieten (Jena), vi, 1 and 2.

Tumors of Bladder. W. WENDEL.—In four of the sixteen observations described, the patients were workmen in aniline factories, which is a suggestive fact. In all the cases the benign papillary tumor of the bladder evidently originated in a primary proliferation of the epithelium, soon accompanied by proliferation of the vessels and connective tissue. These tumors manifest a decided tendency to malignant degeneration, the first indications of which are the appearance of masses of epithelium in the lymph-spaces of the stroma and in small nests which have no direct connection with the surface. Epidermoidal formations are due to leucoplasia, and the epidermoidal cancers of the bladder and urinary passages are to be explained as metaplasia. This leucoplasia may develop without a preceding cystitis, and epidermoid cancer without a preceding leucoplasia. The most careful study of the tumors failed to disclose any evidence of a parasitic origin, but it enforced the necessity of extirpating the foundation on which the tumor grows, for quite a distance into the apparently sound tissue, even in case of pedunculated tumors.

Operative Treatment of Abdominal Tuberculosis. A. FRANK.—The remote results of operative treatment in 63 cases of chronic abdominal tuberculosis and allied conditions are tabulated and the following conclusions in regard to the prognosis are deduced: 1. Tuberculous peritonitis with effusion affords the best prognosis, as 40 to 50 per cent. recovered. 2. The prognosis of the dry variety with adhesions is more serious; only 25 per cent. recovered after operation. 3. The three patients with the ulcerative, suppurative variety died. 4. Among the cases with and without effusion the largest number of recoveries occurred in infection proceeding from the female genitalia: 75 per cent. in the former and 50 per cent. in the latter. 5. The attempt to relieve a patient with indications of peritoneal stenosis, by laparotomy and entero-anastomosis, is a justifiable procedure, although the results are far from brilliant. 6. Tuberculous fecal fistulæ indicate an exceptionally grave prognosis. 7. Tuberculous peritonitis occurring with ovarian cystoma is so rare that the prognosis can not yet be formulated.

Results of Operative Treatment of Basedow's Disease. G. REMBACH.—Four to ten years have passed since Mikulicz operated on his first series of nine cases of Basedow's disease, and the remote results are extremely gratifying. All the objective symptoms were nearly or entirely cured by the operation, and the patients have been completely restored to their working capacity and enjoyment of life. This article reviews the results in 18 operated on. Resection was done in 13 with success; enucleation in 3; bilateral resection in 4 at one time, and in 2 at two separate sittings; unilateral resection in 4. The arteries were ligated in 5 cases. No constant pathologic-anatomic alteration could be discovered specific for the Basedow goiter.

Zeitschrift f. Geb. u. Gyn. (Stuttgart), xlii, 1 and 2.

Conservative Treatment of Pyosalpinx. G. HERRMANN.—Reviewing his experience with thirty-four cases of inflammatory affections of the adnexa, Hermann recommends resolvent, antiphlogistic treatment of acute cases as long as possible, in view of possibility of spontaneous recovery. He would operate in chronic cases where the sterility of the pus can be counted on, that is, nine to twelve months after the end of infectious process, obtaining, if possible, certainty of sterility of pus with a test-puncture. His method is laparotomy, conservative in the extreme.

Ultimate Results of Bilateral Operations on Adnexa. F. BARUCH.—The ultimate results in the cases in which the uterus was removed with the adnexa have proved more favorable than in those in which it was left, according to Baruch's experience with sixty-seven patients followed to date. He attributes this fact to the recurring painful inflammation in the ligated stumps and the stump exudation, which occurred scarcely at all after the radical operation. Other factors were the hemorrhages from the retained uterus, and the climacteric

disturbances, which were much less intense in the fourteen from whom the uterus was removed. Abdominal salpingo-oophorectomy proved effectual in every case, and half of the patients were definitely cured. The percentage of cases in which the working capacity has been restored is about the same with and without removal of the uterus—83.3.

Parietal Bone Presentation. H. BOLLENHAGEN.—Only two out of eight cases of this presentation, at the Würzburg clinic during the last three years, required versio-extractio. The rest terminated spontaneously, consequently Bollenhagen advises awaiting as long as possible before resorting to intervention.

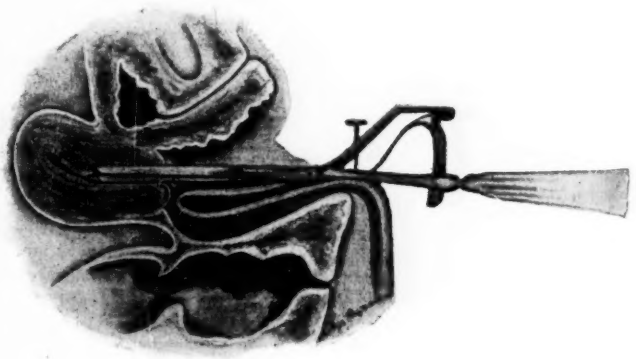
Osmosis Between Mother and Fetus. J. VEIT.—The first result of the research reported was the discovery that the freezing-point of the blood of the child at the moment of birth is lower than that of the mother's blood. It was then noted that the freezing-point of the amniotic fluid is higher than that of the blood of either mother or child. It seems evident from these and other facts mentioned, that the dividing wall between mother and child has something of the nature of a dialytic membrane. Veit adds that further study of the subject may lead to a more rational and effective method of treating eclampsia.

Blood-Pressure in Health. S. JELLINEK.—No relation between blood-pressure and pulse could be detected in tests on 532 healthy soldiers in Vienna. The normal blood-pressure varied between wide limits, from 80 to 185 mm. mercury. The average ranged from 100 to 160 mm. The blood-pressure was higher on the right than on the left side in a number of instances. External stimuli and influences: marching, eating, sharp-shooting, baths, did not affect the blood-pressure materially. In some it was increased, in others, lowered, and in quite a number no effect was perceptible.

Pathogenesis of Eclampsia. W. STROGANOFF.—Several series of cases of eclampsia, occurring at the St. Petersburg Midwives' Institute, sustain the theory advanced by Stroganoff that eclampsia is an infectious disease. Analyzing cases reported by others he notes that Olshausen records eleven series of cases of eclampsia, 83 in all, occurring within 250 days, and Zweifel records twenty series. A curve made up from these and his personal observations shows the same striking accumulation of cases the sixth day after the first infection. He affirms that eclampsia is an acute infectious disease, caused by an air-borne contagium, which usually penetrates into the organism through the air-passages. The disease germ is very slightly virulent. Men and children are not susceptible to it, nor women at any period of their life except during the puerperium. It can also find favorable conditions for development in the fetus, and makes no distinction between male and female in this respect. The germ is very resistant and in hospitals retains its virulence about three weeks. The period of incubation is short, from three to twenty-four hours. Primiparæ, women bearing twins and women with renal affections are most susceptible. Strict isolation of all cases and disinfection of attendants are imperative. Nocard also admits the infectious nature of the disease from his observation of its occurrence in cattle and dogs when casting their young.

Klinitchesky Journal (Moscow), II, 1.

Significance of Pains in Female Pelvic and Peritoneal Cavities. V. T. SNEGUIREFF.—The great importance of the characteristics of the pain in gynecologic troubles, for differentiating affections and indicating treatment, has never been appreciated heretofore. Sneguireff reported a year ago nine cases of severe endometritis dolorosa cured by dilation of the cervix and tamponning the uterus with gauze. As described in THE JOURNAL at the time (March 11, 1899, p. 552), he ascribes endometritis dolorosa to an inflammatory lesion of the uterine mucosa, and not to neuralgia or general neuropathy, as others are inclined to believe. He has been following his cases to date and eight new ones, and has obtained valuable and unexpected information by locating the painful points—which correspond mostly to the emerging points of nerves—and by determining the nature of the pains. He has established, in the first place, that one variety of endometritis dolorosa is a threefold affection, involving the three orifices, anus, urethra and internal orifice of the uterus, which all become spasmodically contracted. The pain is similar in its cause and nature to that of fissura ani, and is benefited by the same treatment as the latter: dilation under narcosis and, if necessary, cutting the fibers of the muscular ring. All the pains vanish at once, showing that compression of the nerves and not an organic lesion was the cause. His method of anterior sphincterian hysterotomy is shown in the cut. One stroke of the concealed knife cuts the internal orifice across and the anterior wall of the cervix. No narcosis is necessary. The patients do not feel the slight incision nor know when it is done. There is no danger of hemorrhage, as he has established that the anterior median line of the uterus, the uterine linea alba, is free from vessels. Even if the bladder should be incised, of which there is scarcely the slightest danger, the incision would close and heal at once with a permanent catheter inserted and left for a time. The region of the incision in the cervix is tamponed with gauze for a couple of days. The significance of the renal plexus in the etiology of pains in the pelvic and peritoneal cavities is another result of his research, and the great benefit derived



from hot rectal injections, which far surpasses the effect of vaginal in these cases. He reports cases of pelveoperitonitis, anteflexio uteri with perimetritis posterior adhesiva, and retroversio fixata, in which the patients were cured of their pains by hot rectal injections and appropriate general measures, calomel, etc., as indicated. As an illustration of the significance of the pains his first observation of endometritis dolorosa is typical. The patient, a multipara, 40 years old, complained of frequent and extremely painful micturition, and pain during coitus and defecation; menses irregular, constipation, digestive disturbances, and hypogastric pains. The painful points were located at the tuberculum pubis on each side, on the inner surface of the thighs, at the renal plexus on both sides, and at the solar plexus and rectum. Sounding the uterus induced intense pain at the internal orifice and in the fundus. Nothing abnormal was noted in the nervous, respiratory or circulatory systems. The uterus was normal in size and consistency. The external orifice allowed the passage of finger tip. The "threefold affection", as he calls it, was in this case treated with gradual dilation, under narcosis, of the three painful orifices—anus, urethra and internal orifice of the uterus—and the latter organ packed with a strip of iodoform gauze, left for two days. In five days all the pains had vanished except in the solar plexus, where they lasted a couple of days longer. Hot rectal injections were also ordered and general tonic measures. The patient left the clinic in three weeks, cured of all her pains, and feeling well and strong. In another observation the painful points were the same as above, and also a point on the spina anterior superior. The pains were much more intense on the left side, and subsided somewhat during menstruation. The other organs and micturition were apparently normal. Coitus was painful at times. This case was treated with dilation of the internal orifice and anterior sphincterian hysterotomy as in the illustration. No narcosis was used. Tamponing was with iodoform gauze left for three days. By this time all the pains had disappeared except in the fundus, and these also soon vanished and the patient was dismissed completely

cured in ten days after operation. The painful points are to be sought by pressure, and the sympathetic connection between them is evident. He calls the emerging points of the nerves along the anterior rim of the pelvis the most important, five in all, with the renal, solar, spermatic, and superior hypogastric plexuses, the synchondrosis sacroiliaca, McBurney's point, and two spots on each side a trifle inward and downward from McBurney's point, which correspond to the most sensitive ones in the uterus. In examining these points the patient lies in the dorsal decubitus, the lower limbs together and extended. Besides these areas he calls attention to five others noted in the perineal region. One is the emerging point of the ileo-inguinal nerve; another of the superior internal cutaneous, also of the pubic nerve and, lastly, a point near the edge of the levator ani, equidistant from the anus and the opening of the vagina. Each of these thirty-two points is fraught with significance to the gynecologist, and will reward further study.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

Fifth District Branch of the New York State Medical Association, Brooklyn, N. Y., May 22.

American Medico-Psychological Association, Richmond, Va., May 22-25.

Connecticut State Medical Society, New Haven, May 23-24.

North Dakota State Medical Society, Grand Forks, May 23-24.

West Tennessee Medical and Surgical Association, Jackson, May 24-25.

Indiana State Medical Society, Anderson, May 24-25.

Association of Military Surgeons of the United States, New York City, May 31 to June 2.

American Laryngological, Rhinological and Otological Society, Philadelphia, May 31, June 1 and 2.

New Hampshire Medical Society, Concord, May 31 and June 1.

International Association of Railway Surgeons, Detroit, Mich., May 30 to June 1.

Baltimore & Ohio Association of Railway Surgeons, Atlantic City, N. J., June 1-2.

Conf. of State and Prov. Bds. of Health of N. A., Atlantic City, N. J., June 1-2.

American Academy of Medicine, Atlantic City, N. J., June 4.

American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4.

New Mexico Medical Society, Santa Fe, June 5.

American Association of Acting Assistant-Surgeons, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.

Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.

American Association of Military Surgeons of the U. S., New York City, June 12-14.

Oregon State Medical Society, Portland, June 12-14.

Colorado State Medical Society, Denver, June 13.

Maine Medical Association, Portland, June 13-15.

South Dakota State Medical Society, Aberdeen, June 14.

Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

Allen County Medical Society.—The election of officers for this Society, which met in Lima, Ohio, May 1, resulted as follows: president, W. H. Parent; vice-president, Frank Steiner; secretary and treasurer, Andrew Rice.

Camden District Medical Society.—At the annual session of this Society, held recently in Camden, N. J., the following officers were elected: president, J. F. Leavitt; vice-president, Wm. F. Powell; secretary, P. M. Mecray; treasurer, E. R. Ramsdell.

Berkshire Medical Society.—The members of this Society met May 3, in Pittsfield, Mass., and elected the following officers: president, W. W. Scofield, Dalton; vice-president, M. L. Woodruff, Pittsfield; secretary, L. C. Swift; treasurer, W. L. Paddock.

Warren County Medical Society.—This Society met in Monmouth, Ill., May 16 and 17. The following new officers were elected: president, Cynthia Skinner, Monmouth; vice-president, A. R. Graham, Little York; secretary, Della Nichol; treasurer, J. C. Kilgore.

Southeast Missouri Medical Association.—This Society met in Poplar Bluff, Mo., May 1. The new officers elected were: president, M. Rosenthal, Kennett; vice-president, C. F. Greene, Poplar Bluff; secretary, G. S. Cannon, Jackson; treasurer, R. F. Henderson, Jackson.

Fort Dodge District Medical Society.—At the recent meeting of this Society in Fort Dodge, Iowa, the following officers were elected for the ensuing year: president, C. J. Saunders; vice-president, T. F. Grayson; secretary, A. H. McCreight; treasurer Dr. Ristine.

South Carolina Medical Association.—This body met in Charleston, S. C., April 18 and 19, and elected the following officers: president, Geo. R. Dean, Spartanburg; recording secretary, T. P. Whaley, Charleston; corresponding secretary, A. J. Buist, Charleston; treasurer, B. E. Baker, Charleston.

Southern California Medical Society.—This Society closed a three days' session in Riverside, Cal., May 5. The new officers elected were: president, Fred Baker, San Diego; first vice-president, A. S. Parker, Riverside; second vice-president, C. M. Browning, Highland; secretary, F. D. Bullard, Los Angeles.

Union Medical Association of Northeastern Ohio.—At the 115th quarterly meeting of this Association, held in Canton, Ohio, May 2, the following officers were installed: president, T. J. Reed, Massillon; vice-president, J. F. Fox, New Philadelphia; second vice-president, Geo S. Peck, Youngstown; recording secretary, J. H. Seidler, Akron.

New York County Medical Association.—This Association will meet in New York City, May 21. Papers will be presented by Drs. Wm. M. Leszynsky, Wm. S. Gottheil, Wm. H. Bates, Herman M. Biggs, Francis Quinlan and others of New York City; Dr. S. Solis-Cohen and Prof. John B. Shober of Philadelphia.

Nebraska State Medical Society.—At the meeting held in Omaha, Neb., May 8-10, the officers elected for the ensuing year were: president, H. M. McClanahan, Omaha; vice-president, Inez Philbrick, Lincoln; corresponding secretary, H. B. Loury, Lincoln; recording secretary, A. D. Wilkinson, Lincoln; treasurer, J. L. Greene, University Place. Thirty-seven new members were added.

Arizona Medical Association.—This Association met May 3, in Prescott, Ariz. Fourteen new members were enrolled and the following officers elected: president, T. B. Davis, Prescott; first vice-president, John Dennett, Congress; second vice-president, Albert E. Ealy, Kingman; secretary, Chas. H. Jones, Tempe; treasurer, H. W. Hiram, Tucson. Phoenix was selected as the next place of meeting.

Clark County Medical Society.—This Society held its annual meeting in Springfield, Ohio, May 4. Arrangements were made for the semi-centennial celebration to be held there May 31. The following officers were elected: president, B. D. Titlow; vice-president, T. M. Reade; second vice-president, S. R. Hutchings; secretary and treasurer, C. B. Bliss.

Norfolk District Medical Society.—The fiftieth anniversary of this Society was observed in Boston, May 8. Dr.

Harold Crust delivered an oration upon the work and progress of the society, and short addresses were made by many of the guests. The following officers were elected for the ensuing year: president, F. W. Goss; vice-president, C. F. Withington; secretary and librarian, Jas. C. D. Pigeon; treasurer, E. G. Morse.

Ohio State Medical Society.—The fifty-fifth annual meeting of this Society was held in Columbus, Ohio, May 9-11. Cincinnati was chosen as the next meeting-place, and the following officers were elected to serve the ensuing year: president, F. D. Bain, Kenton; first vice-president, J. S. Beck, Dayton; second vice-president, A. W. Francis, Ripley; third vice-president, L. B. Tuckerman, Cleveland; fourth vice-president, Frank Warner, Columbus; secretary, J. A. Thompson, Cincinnati; treasurer, J. A. Dun, Toledo.

American Surgical Association.

Annual Meeting, Washington, D. C., May 1-3, 1900.

PERFORATING ULCER OF DUODENUM.

DR. ROBERT F. WEIR, New York City, used this as the subject of his presidential address, and considered it under six different heads viz.: sex, causes, frequency, age, size, and symptoms. The last was given considerable attention, and a large number of statistics and references were presented, accompanied by an expression of his opinion concerning the most important. The diagnosis was also considered in detail and the treatment from several standpoints. His experience in the surgical treatment of a duodenal perforation was confined to one case, which he described, including the post-mortem findings. The paper concluded with a list of all patients who have undergone this operation up to April, 1900.

GASTRIC ULCER: NON-PERFORATING: HEMORRHAGE.

DR. WILLIAM L. RODMAN, Philadelphia, read a paper on this, and considered the subject under eight headings, viz.: morbid anatomy, etiology, age, symptoms, hemorrhage, physical signs, prognosis and treatment. Extensive statistics were given under several of the headings, and the treatment of the condition was divided into medical and surgical, the latter in turn being divided into gastrotomy and gastrotomy with curetting, cauterizing, etc.

The mortality of the various methods of treating gastric ulcer by different operators was detailed and twelve different operative measures mentioned in the treatment of gastric hemorrhage. The results of 55 autopsies in non-operative cases were given, in 17 of which occurred ulceration of the splenic artery.

The literature bearing on gastric ulcer was most carefully reviewed, and all operative cases up to date included in the summary. Gastroenterostomy was referred to as being the most generally practiced operation for hemorrhage and as likely to remain so for some time on account of the difficulty in locating the bleeding vessel. Excision is, however, the ideal operation in both hemorrhagic and non-hemorrhagic cases, and should be practiced unless there are prohibitive adhesions.

PERFORATING ULCER OF STOMACH.

DR. J. M. T. FINNEY, Baltimore, Md., considered the history, etiology, frequency of occurrence, pathologic anatomy, symptomatology, diagnosis, treatment, surgical treatment and prognosis of this condition. He said that the nature and extent of the development of a peritonitis in these cases depends on the site of perforations, their number and size, the character and amount of the gastric contents, and the number and varieties of bacteria that escape from the stomach into the peritoneal cavity at the time of perforation. Referring to the first questions needing attention in the treatment of a general septic peritonitis, he mentioned the giving or not of opium; the waiting or not until recovery from shock and the indications existing for an operation. He described the steps of the operation, as he performs it, and called attention to the fact that some of the complications which have been noted were intestinal obstruction from kinking, parotitis, phlebitis, subphrenic abscess, pneumonia and empyema. As to prognosis, he gave seven factors that played important parts: the condition of the stomach, whether empty or full, when the perforation takes place; the interval between the last meal and the perforation; the time elapsing between the perforation and the operation; the number and size of perforations; the position of the patient at the time of perforation; the perfection of the technique at the operation; the nature of the infectious agent, whether or not streptococcus or pyogenes.

MALIGNANT DISEASE OF STOMACH AND PYLORUS.

DR. WILLIAM J. MAYO, Rochester, Minn., presented this subject and stated that the curability of malignant disease depends on the histologic structure of the growth, its location, extension to neighboring structures, glandular involvement, and the general condition of the patient. He said also that in the beginning, each operation is an exploratory incision, and that this should be a methodical examination, having in view the question of radical operation, palliation, or the inadvisability of attempt at relief. The radical operations to which he referred were complete gastrectomy and pylorectomy and partial gastrectomy; the palliative, gastroenterostomy and jejunostomy, etc.

The preparation of patients for operation on the stomach and the after-care were given considerable attention. He mentioned that malignant disease of the stomach has a peculiarly depressing effect on the patient, and that ascites, even in a limited degree, is a contraindication to operation. Cases of non-malignant disease, too far advanced to extirpate and not requiring palliation, should be closed by the Halsted method. He does not consider that the results of operations limited to the pyloric end of the stomach, taken as a whole, have been satisfactory, although a few cures have taken place in exceptionally favorable cases. He referred to various methods of operating, and mentioned the suture operation of Fenger as an ideal one. The statistics of different operators were given, showing that in 31 gastroenterostomies for benign as well as malignant diseases, in only 2 regurgitant vomiting was marked, both of which were malignant.

BENIGN OBSTRUCTION OF PYLORUS.

DR. FREDERICK KAMMERER, New York City, read a paper on this subject, considering it as congenital and acquired stenosis. He divided the first into two subdivisions: acute, absolute at birth—fetal peritonitis—and congenital hypertrophy of the pylorus. The second or acquired variety, he subdivided into fibrous stenosis; occlusion of the pylorus by benign tumors; syphilitic lesions of the pylorus; gall-stones obstructing the pylorus; spastic contraction of the pylorus—hyperchlorhydria.

He then tok up the surgical treatment of benign obstruction, dealing with the dilatation of the stricture and the operative procedures, of which he mentioned three: resection of the pylorus; Loreta's operation; simple division of adhesions about the pylorus. He also discussed relative merits of pyloroplasty and gastroenterostomy, comparing the two procedures and the immediate, as well as remote, results obtained by each, giving many points in their technique.

GASTRIC DILATATION.

DR. B. F. CURTIS, New York City, considered gastroptosis. He said that gastrectasia was almost unknown except in three conditions: malignant disease, benign stenosis and gastroptosis, causing obstruction of the pylorus. This last he treated under three subdivisions: pathology—inclusive of enteroptosis; symptoms and diagnosis; surgical treatment—either gastroplication or gastroenterostomy. He considers that gastroplication is the rival of gastroenterostomy, and that gastroptosis has only recently been brought within the possibilities of surgical treatment He dwelt on the difficulties of diagnosis of these conditions, and quoted some cases *in extenso* and mentioned some of the details of the operation.

HOUR-GLASS CONTRACTION OF STOMACH.

DR. F. S. WATSON, Boston, presented an article on this subject, considering the condition under three major headings: The different forms of hour-glass stomach and the functional and pathologic changes associated with them. 2. The symptoms and diagnosis. 3. The operative treatment. Under the last he gave the indications and contraindications for the

different operations, together with the reports of some of the cases operated on by gastro-anastomosis.

DIAGNOSIS OF CANCER OF STOMACH.

DR. JOHN C. HEMMETER, Baltimore, Md., by invitation, read a paper on this subject. The definition of the term "early diagnosis" was given. He then spoke of age, the diagnostic value, the subjective and objective symptoms, the significance of blood and hematemesis, constipation or diarrhea, the emaciation and cachexia, condition of the gastric functions, the secretion of pepsin and chymosin with the method of examining for the same, the lactic acid, and the microscopic examination of the stomach contents, etc.

GASTRIC FUNCTIONS BEFORE AND AFTER GASTROENTEROSTOMY.

DR. CHARLES S. FISCHER, New York City, presented an article on this subject, in which he spoke of several cases that had come under his own observation, and said that examinations of the gastric contents shortly before an operation are valueless.

STRICTURE OF ESOPHAGUS.

DR. FREDERIC S. DENNIS, New York City, read a paper on stricture of the esophagus, following typhoid fever and relieved by gastrostomy. He affirmed that he had had good results.

ADHESIONS OF THE STOMACH.

DR. A. T. CABOT, Boston, made some remarks on this topic, giving the symptoms of the condition and the methods of obtaining relief.

DISLOCATION OF HIP.

DR. OSCAR H. ALLIS, Philadelphia, gave a series of demonstrations on the cadaver, illustrating his mechanism for producing and reducing various dislocations of the hip.

NEPHRECTOMY FOR ANEURYSM OF RENAL ARTERY.

DR. W. W. KEEN, Philadelphia, in a paper on this subject, said he had been able to learn of 12 cases of aneurysm of the renal artery, and of these, only 3 had been operated on; the first, by Albert of Vienna in 1891, the second, by Hahn of Berlin in 1893, and the third, the one in question, which was that of a woman of 45, who, having had at intervals attacks of pain in the region of the gall-bladder for four or five years, together with fever, finally observed that the right side of the abdomen was larger than the left. This tumor had developed in less than five years and without any known cause, and was, apparently, partly cystic, partly solid, painless and fixed. Diagnosis: a partially cystic tumor of the right kidney, probably due to hydronephrosis, but with a possibility of a sarcoma or other neoplasm. The operation was performed Feb. 1, 1900, through an anterior incision 17 cm. long. In less than thirty minutes the tumor was readily separated from its adhesions to the other viscera, after tearing through the outer leaflet of the mesocolon. The pedicle was so broad that it had to be secured in seven sections, the arteries were numerous and the veins enormously distended. The nature of the tumor was not recognized at the time of operation nor, indeed, until after its removal, when a section of it showed that the kidney was flattened out on the surface of a large mass, measuring, 14.5 cm. in diameter and weighing 970 grams, and that nearly all of it was made up of a mass of laminated clots, showing that it was a large aneurysm of the renal artery, a branch of which was traced directly into the aneurysm.

In only one of all the 13 cases collected was a correct diagnosis made. In at least 6 of these the cause was an injury. A recognized tumor was present in only 6, and in the other cases the aneurysm was rather of pathologic than of surgical interest. Pulsation was not present in any of the cases, due to the fact that the artery was small, the sac large and the impulse of the blood not sufficient to distend it and so produce pulsation. Hematuria is only present when the aneurysm either develops in the kidney or bursts into the pelvis. All 3 of the cases operated on by nephrectomy terminated in recovery.

TUMOR OF SUPERIOR PARIETAL CONVOLUTION ACCURATELY LOCALIZED AND REMOVED BY OPERATION.

DR. CHARLES K. MILLS, Philadelphia, presented the medical history of this case—one of unusual interest from the clinical, physiologic and surgical points of view. The patient was a man 56 years old, who had some neurasthenic and other symptoms since 1884, and began to have paresthetic attacks, affecting his right upper extremity, in 1894. These attacks were of irregular and infrequent occurrence, and were variously described as feelings of crawling, tingling or battery sensations. After the attacks the arm usually felt somewhat heavy, and he frequently complained of a feeling of pressure or discomfort in the head, and especially in the left frontoparietal region. Sometimes this was described as a headache, but he never had the typical headache of a case of brain tumor. Optic neuritis was absent from the first, and vertigo and vomiting were so infrequent as to call for no special consideration, but he was frequently hysterical and despondent.

About five months previous to the operation, he began to show some ataxia in the right arm, and later in the right leg; when investigation of his condition was first made all forms of cutaneous sensibility were impaired, muscular sense was lost. As the case progressed paresis and, eventually, paralysis of the arm and leg supervened and this when complete masked the ataxia. The patient developed a disorder of speech showing itself chiefly as a verbal amnesia and fatigue when he was reading. At one examination he showed a temporary partial right hemianopsia. Reversals of the color fields and contractions of the fields for form, similar to those supposed to be typical of hysteria, were present at several of the examinations. The reflexes of the ataxic and paralyzed side, were somewhat exaggerated, and ankle-clonus was present. The patient was emotional and markedly hysterical.

An operation, which was successfully performed by Dr. W. W. Keen, November 24, exposed a tumor in the exact region which had been assigned as the seat of the growth, viz., the superior parietal convolution.

The patient made a complete surgical recovery, and improved in all his symptoms with comparative rapidity; his speech completely returned, the paralysis of the leg and arm largely disappeared, and cutaneous sensibility was in time restored. He was seen last by Dr. Mills, April 24, when he found that he had regained all the movements of the extremities on the affected side, although he has not full strength in those limbs, and the muscular sense, especially in the lower extremity, is still somewhat impaired, as would be expected from the tissue lost by the encroachment of the growth.

DR. W. W. KEEN, Philadelphia, in giving the surgical history said that as the flap was not to be in the thin, squamous portion of the temple, but in the parietal, it might cause great embarrassment from a very thick skull, not only by the time required to chisel through the bone, but the difficulty of fracturing the base of the osteoplastic flap, so he first made two trephine openings 0.5 cm. in diameter at the two points between which he wished to fracture the flap. The skull was found, as had been feared, unusually thick, being a full centimeter, consequently a Gigli wire saw was passed between the two points, and the bone sawed half through in order to weaken the base of the flap. A large flap, each side of which was 10 cm. long was then made, the anterior border of it being a little in front of the fissure of Rolando; the upper border within 1 cm. of the median line.

As soon as the dura was exposed at the lower portion fluid was suspected beneath it and a dural flap was then cut, with the base upward. The tumor suddenly came into view at the anterior superior angle. It measured 5.5 cm. by 4.5 cm., weighed over an ounce, and was made up of small, granular masses like those of an ordinary raspberry, and was of a deep red or purple color. In order to remove the entire tumor, a portion of bone was removed anteriorly. The tumor had begun as a subcortical mass and then burst through the cortex. It was now separated from the brain tissue and removed in connection with a long finger-like cyst which extended, by measurement, 10 cm. into the substance of the brain, and contained from 1½ to 2 ounces of fluid. The patient made a complete and very smooth recovery, the wound being entirely well by the sixth day. On February 23, just three months after

the operation, he walked up the steps of the hospital with a scarcely perceptible limp, and shook hands with ease. His speech was entirely normal and his mental condition excellent, and a week later he started for a pleasure trip on the Mediterranean.

The following officers were elected for the ensuing year: President, Roswell Park, Buffalo, N. Y.; first vice-president, John E. Owens, Chicago; second vice-president, Clayton Parkhill, Denver, Colo.; secretary Herbert L. Burrell, Boston; treasurer, George R. Fowler, New York City; recorder, DeForrest Willard, Philadelphia. The next meeting will be held in Baltimore, Md., May 7-9, 1901.

New York Academy of Medicine.

Section on Obstetrics and Gynecology, April 26, 1900.

Wm. H. Thomson, M. D., President.

PREVENTION OF DYSTOCIA.

DR. EDWARD A. AYERS presented a paper entitled "The Prevention of Dystocia Due to Fetal and Pelvic Disproportion." Speaking of the value of the previous history of labors in multipara, the author advised that inquiry be made regarding the length of previous labors, the size of the children, the character of the uterine contractions, and the general appearance of the head of the infant at the time of birth—the latter with a view to forming some conception of the probable amount of head moulding that had been present. He said that it was well to remember that, other things being equal, the pelvis of a stout woman is not so roomy as that of one less fleshy, and that each successive labor usually brings a slightly larger child, up to the age of 35 years, and that after this age the weight and size of each succeeding fetus is less than that of the preceding one. Another element in making the prognosis in a given case of labor is the general size and development of all the bones of the skeleton, and the width of the pubic arch. Special stress was laid on the value of the information obtainable from a method of examination during pregnancy known as tentative engagement of the head. Where there was marked contraction of the pelvic inlet, the head would lie high, and when the obstetrician endeavored with his hand to force the fetal head down into the pelvis there would be a suddenly developed and marked resistance. If, on the other hand, the inlet was fairly spacious, the head could be forced down some distance and would finally come gradually to a rest. Regarding the important subject of the induction of premature labor, the speaker said that this was a procedure which, in effect, transferred the danger from the mother to the child, and the question of the justifiability or advisability of resorting to it hinged chiefly on the extent to which the life of the child was jeopardized by inducing labor two or three weeks ahead of the natural time as compared with allowing labor to come on at full term, the child then being subjected to a difficult and tedious, and possibly an instrumental, delivery. The measures recommended for inducing labor were: 1. The use of a solid, flexible, tapering bougie. 2. The use of a small Barnes' bag to initiate the contractions. 3. The introduction of a tampon.

INDICATIONS FOR PREMATURE DELIVERY.

DR. S. MARX read a paper entitled "Indications for Premature Delivery with Special Reference to Eclampsia—The True Toxemia of Pregnancy," in which he said that puerperal eclampsia, from the standpoint of the clinician, is closely allied to renal insufficiency, and that the quickest way to restore the health is by measures directed to the restoration of the renal function. He dwelt particularly on the fact, so little appreciated by physicians generally, that the mere determination of the presence of albuminuria is of little significance in comparison with the knowledge of the daily quantity of urea excreted, for there may be no albumin in the urine, and yet the careful and thoughtful physician may have good reason for believing that his patient is on the verge of an attack of eclampsia. The daily quantity of urea should be about 500 grains, and the progressive diminution of the quantity of urea, with or without albuminuria, should be taken as an indication for interference. He advised that all pregnant women be subjected to a pelvimetric examination, but that this instrument be used for purposes of comparison only, and since so much depends on the relative size of the fetal and maternal parts, he cautioned against sweeping deductions from such uncertain premises. When it is found, by pressure from above with the hand, that the head can not be made to engage, it is time to interfere.

TREATMENT OF TUMORS COMPLICATING PREGNANCY.

DR. BROOKS H. WELLS read a paper on this subject in which he said that where a pregnant woman has cancer of the cervix, vaginal hysterectomy should be performed while the uterus is small; that in the early stages it is possible for the cervix to dilate sufficiently to allow labor to proceed, but extensive lacerations are likely to occur; that while a woman with fibroids is not liable to become pregnant, still pregnancy may occur, and under its stimulus the fibroids will grow much more rapidly. The higher up the tumor, and the more nearly of the subperitoneal variety, the less dangerous it is as a complication of labor, but the mortality in labors so complicated has been as high as 50 per cent. in the past. For interstitial tumors, a supravaginal hysterectomy should be performed, and tumors of the cervix should be enucleated when possible. Large ovarian cysts are not likely to block the pelvis, but their pedicles are prone to become twisted and gangrenous. If the case is not seen until labor has begun, and the operation is progressing and the cyst not impacted, the operation should be deferred until after the birth of the child. According to his experience, abdominal operations are well borne during pregnancy.

DIFFICULT OR DELAYED DELIVERY.

DR. MALCOLM MCLEAN discussed the question: "When is It Proper to Interfere in Apparently Difficult or Delayed Delivery, Especially in Primiparæ?" He said that if the presenting part is high up and movable, and the pelvic measurements within the normal limits, one should not interfere, because much unnecessary damage is done to parturient women by attempting surgical interference before the soft parts have had an opportunity to properly relax and dilate.

DR. E. A TUCKER said that he makes it a practice to advise his patients to do considerable walking during the last few weeks of pregnancy, as a means of facilitating good engagement of the head.

DR. EGBERT H. GRANDIN said that if the presenting part will engage under suprapubic pressure, it is highly probable that labor can be completed without assistance, but when such engagement can not be effected with the hand, the physician should at once interfere. He considers the tamponade of sterile gauze the best mode of inducing labor, and the bougie the most tedious and unreliable. He has seen so many and such severe cases of puerperal eclampsia occur in women whose urine has been absolutely free from albumin, that it is his practice, just as soon as there is diminution, both of the total quantity of urine and of the urea, to proceed to empty the uterus, without waiting for cephalalgia, impaired vision and other symptoms of renal insufficiency.

DR. S. MARX said that his own experience has convinced him that it is possible to accomplish considerable for those women who anticipate hard labors because of the large size of the child, by dietetic management, i. e., restricting the starches and sweets, and diminishing the quantity of water taken.

DR. E. A. AYRES indorsed what had been said about the value of walking to the pregnant woman during the last few weeks, but added that while this is an excellent rule for those in good health, its observance in the case of one suffering from renal insufficiency may lead to disastrous consequences.

Chicago Surgical Society.

April Meeting.

CASE OF TENDOPLASTY.

DR. L. L. MCARTHUR—As Dr. Murphy is down on the program to report a case of tendoplasty, it will add to the interest of the meeting to report a case which I recently oper-

ated on. Briefly, six weeks ago a girl, in going home from school, fell on a slippery sidewalk and sustained a punctured wound between the thenar and hypothenar eminences of the left hand. It was not known whether this wound was produced by glass or ice. It was transverse in direction to the long axis of the arm and about half an inch in length. I saw her four days later, when there was tumefaction, tenderness and pain above the annular ligament of the wrist-joint. There was no fever. The tumefaction and tenderness led me to believe that she had a deep-seated tendovaginitis without superficial redness, and I therefore requested that she be taken to my clinic. On opening the wound I found that there was no infection; that the punctured wound had resulted in the severing of five flexor tendons in the position mentioned between the thenar and hypothenar eminences, and also in a complete severing of the median nerve. It then became necessary to find the retracted ends of the tendons and suture them, and it at the same time became evident that the swelling was not due to inflammation, but to the bunch of retracted tendons presented like a tumor away above the wrist, so that an incision two inches and a half in length was made, and by careful dissection the retracted ends were found, brought down and sutured. The median nerve was also sutured, and primary union obtained. She was requested to return at the end of a week, for redressing, and at that time the stitches were taken out. At the end of two weeks she again returned to the clinic and, to my surprise, had already gained sensation in the first three fingers of the hand, which had been lost at first. This was unusually early for the return of sensation after nerve suturing, the earliest instance with which I am familiar, sensation having returned prior to the fourteenth day. I made suture of the tendons in this case with fine silkworm gut, which is almost comparable to horsehair in size and is of much greater strength, and being unirritating I prefer it to silk or catgut with the possibilities of infection that go with the latter.

The question now arises in my mind as to the period at which it is safe or desirable to break up the adhesions which necessarily form in the tendon sheaths at the site of such suturing. When first sutured, she was unable to move the fingers. She now has excellent use of the flexor sublimis digitorum and can readily approximate the ends of the fingers with the thumb. Much of the flexion is due to the first action of the sublimis, and further action is to be hoped for when we have further interfered with it.

DR. A. J. OCHSNER said that some three years ago he went through the literature of nerve grafting, and he desired to bring out one point in reference to nerve suture and the sequent return of sensation, of which Dr. McArthur spoke, because this point was impressed on him at that time. He had reported seven cases of nerve suture and nerve grafting, and to his surprise he found that within twelve hours sensation returned in those cases in which the nerve had been entirely severed and in which there had been no sensation before.

Another observation which he had made and desired to mention is with reference to tendon suturing at a distance. The longest distance at which he has grafted tendons was about six inches, in a case following a railroad injury, in which the extensor tendons of the hand had been destroyed by infection. The tendon grafting was done by means of fine catgut passed from the remaining tendon above to the remnant below, and then covering it in with available fascia. This operation was done four years ago, and the man is now able to work. He has fair motion and very good extension.

DR. M. L. HARRIS said that one of the most frequent causes of failure to obtain perfect motion after inflammation of the severed tendon is the fact that the cicatrix uniting the tendon blends with the one that unites the skin. Some time ago he published an article which was illustrated by a number of cases of tendon surgery, in which this point was particularly emphasized, and he advised that the surgeon should always interpose a layer of tissue between the cicatrix in the tendon and that in the skin, and that these different layers should all be sutured separately, as he found in several cases that it makes a remarkable difference in the facility with which motion is regained after these operations.

In reference to the point made by Dr. McArthur, as to the time at which to break up adhesions, Koenig goes into this subject quite thoroughly and as the result of some experimental work which he did on the union of tendons in tendon sheaths, he finds that these tendons unite in a quite similar manner to bone and likens the union to that which formed first between the divided ends of the callus-uniting bone. This callus has a union with the tendon sheath. If the union between the tendon and tendon sheath is broken up too early, the callus is excited to activity and union again occurs. It becomes adherent to the tendon sheath. He advises not to make too active motion in these cases until the callus has time to form and begin its absorption, and the period of time from the formation of this callus to its complete absorption is about six weeks. While active motion should be encouraged to a mild extent previous to this time, too violent, forcible motion should not be instituted previous to the time of absorption of the callus. The material Dr. Harris favors for tendon suture is silk, and it will remain in tendons indefinitely. He has a number of cases in which silk has remained for several years, and the tendons are perfectly movable. Surgeons should select a suture material which will stand considerable tension.

DR. JACOB FRANK said that the swelling referred to is characteristic of tendons that are cut through. He has seen two or three such cases. He mentioned one case in which he cut from high up on the forearm almost down to the knuckles to find the origin of the tendon, and the swelling after the operation quickly disappeared, whereas before it was large. He considers it a true tendonitis. He has learned that in uniting tendons, no matter if the tendon be cut through, not the slightest amount of tension should be used. The hand must be at perfect rest.

DR. L. L. MCARTHUR, in closing the discussion, said that in regard to the return of sensation in twelve hours after the suture of the nerve, some authorities are of the opinion that such a return is doubtful as occurring through a sutured nerve, and believe that there may have been a mistake in the diagnosis of sensation, or that it may be a collateral innervation.

In regard to the Harris method of suture, he was ignorant of it and was glad to learn of it.

As to putting in sutures that require tension to approximate the ends of the tendons, in his opinion the proper thing to do is to put these tendons physiologically at rest, to put the parts in that position which will thoroughly relax them, and in his case he took particular pains to close up the fingers, the sublimis profundus digitorum, and the wrist, bandaging so as to relax all tension, and in this way putting the parts physiologically at rest, and therefore having practically no tension on the ends of the tendons.

DOUBLE PYOSALPINX WITH INTESTINAL RESECTION.

DR. JACOB FRANK reported a case of this condition. Although cases similar to the one he desired to report are quite common, he took this opportunity to present one of double pyosalpinx with tubo-ovarian abscess complicated with such firm peritoneal and intestinal adhesions that resection of the bowel was necessary for the removal of the tubes.

The patient, Mrs. B., aged 23, gave the following history: When 17 years of age she was operated on for suppressed menstruation. She was married at 19 and aborted at the second month. From the patient's statements he was led to believe that she had gonorrheal arthritis about two years ago, although she insisted it was inflammatory rheumatism. On October 30 of last year she was taken with severe pain in the abdomen, which was very painful on pressure. When sent to the hospital, her temperature and pulse were high. For about five weeks she was treated on the expectant plan, with hot douches, stupes to the abdomen, and occasionally morphin was necessary to allay pain. Everything seemed to progress nicely, when, on the evening of November 22, she presented symptoms of intestinal obstruction, and on the morning of the 23d she was operated on. A median incision was made

and a conglomerate mass of adherent tubes, ovaries, intestines and omentum was encountered. The bowel was flexed by the adhesions and looked edematous, and lying in the midst of the adhesions two small abscesses were found. Owing to the great number and density of the adhesions, which resisted all attempts at careful separation, a rent in the bowel in two different places was accidentally made during removal of the tubes and ovaries. The coil of intestines with the tears was then carefully inspected and the walls were found to be very friable and infiltrated, so it was decided to do an intestinal resection. The anastomosis was effected by means of the Frank decalcified bone-coupler, of which a one-eighth-inch size was used, the measurement having been determined by means of the Frank enterometer. The operation was completed by inserting a Mikulicz and glass drain. The patient left the table in fair condition, but under the usual after-treatment gradually grew worse, until the fourth day, when her life was despaired of, notwithstanding the fact that she had early bowel movements following enemata. At no time, however, was there any escape of fecal matter from the anastomosis. After the fourth day she commenced to improve and left the hospital on Dec. 28, 1899. The piece of rubber tubing was passed on the fifth day following the anastomosis.

DR. E. W. ANDREWS said that while he believed the Frank coupler is an improvement on any metallic device, yet the one which he used in a case was defective. Perhaps it would not be considered defective if one believes, as Dr. Frank does, that nine hours is sufficient time to get adhesion. Not believing this, however, the speaker was thoroughly alarmed at the rapid manner in which the bone parts of the coupler went to pieces in a case of strangulated hernia in which he used the coupler, although the patient fortunately recovered. In this case he had resected eighteen inches of the intestine. On the following day Dr. Frank demonstrated a new coupler before his (Dr. Andrews') class. The second day after the demonstration Dr. Andrews killed the dog to get the specimen, and he was alarmed to find that the bony parts of the coupler had softened to the consistency of white paste and had flattened out. The bowel was held fairly well by the four stitches which he had put in the form of a quadrant of a circle. Personally, Dr. Andrews does not believe that adhesion strong enough to hold the bowel takes place in six hours, although it may do so in connection with a row of Lembert stitches.

DR. JACOB FRANK said the couplers can be made to absorb just as readily as catgut if they are formalinized or chromicized, and will come away just as the metal buttons do, but he has not found any need of doing this. The coupler which he used in the demonstration before Dr. Andrews' class was one he brought from Europe, which was made of bone, chemically prepared, and was not as good as the average coupler made in this country.

Kansas Medical Society.

Thirty-fourth Annual Session, held in Topeka, Kan., May 2-4, 1900.

Dr. Charles Gardiner, Emporia, president.

ADDRESS OF PRESIDENT.

DR. CHARLES GARDINER, Emporia, in his presidential address, decried patent medicines and physicians who use and endorse them. He paid a glowing tribute to Dr. Benjamin Rush and urged the Society to see that Kansas should contribute her full share to the erection of a monument to his memory.

COMMITTEES AND RESOLUTIONS.

A committee composed of Drs. B. D. Eastman, W. T. Sawhill and W. L. Schenck was appointed to draw up resolutions on proprietary medicines. A resolution was passed, presented by the Douglas County Medical Society, to have a committee appointed to endeavor to secure pure foods and medicines by legislation.

A committee of five was also appointed to draft and present to the next legislature a bill for the protection of regular practitioners from the inroads of quacks and other impostors.

A resolution having in view the appointment of a national board of examiners, certificates from which would entitle the holder to practice anywhere in the United States, was defeated.

The next meeting is to be held at Pittsburg, Kan., May 2-4, 1901. The following are the officers for the ensuing year: president, J. W. Porter, Pittsburg; first vice-president, J. P. Lewis, Topeka; second vice-president, C. P. Shafer, Topeka; corresponding secretary, J. W. May, Kansas City, Kan.; treasurer, L. H. Munn, Topeka; librarian, S. G. Stewart, Topeka.

There were forty-eight papers read during the session, covering a wide field of professional work.

STATE CONTROL OF TUBERCULOSIS.

DR. W. E. MCVEY, Topeka, in a paper on this subject, said that the laws to regulate and control bovine tuberculosis have not been passed on account of the danger of human tuberculosis resulting, but for financial reasons, as healthy herds are more profitable, while the laity does not realize the danger that really exists from infected herds.

DR. R. S. MAGEE, Topeka, said that when the city's health board is notified of a tubercular patient dying, or moving from a house, that house is immediately and thoroughly disinfected. This has been the rule in Topeka for some years, and it should always be done.

OCCIPITO-POSTERIOR PRESENTATION IN LABOR.

DR. J. DILLON, Eureka, read a paper on this subject. He advises, when flexion can not be secured, the use of extreme extension and delivery chin first, a method which is practically unknown.

DR. G. A. BOYLE, Louisburg, spoke of one case in which he had used that method and in which the eyes of the child protruded extensively, but in about ten days there were no indications on the child of the difficult labor.

SPECIALIZING.

DR. L. REYNOLDS, Horton, read a paper on "How Much of the Specialties Shall the General Practitioner Do?" He thinks physicians should know more about all the specialties and not send so many patients away, when they should know how to treat them.

DR. J. W. MAY, Kansas City, Kan., said that he has found that the general practitioner is becoming more of a specialist every year and getting more knowledge on all branches.

VACCINATION.

DR. T. W. PEERS, Topeka, in his paper, considered modern vaccination, and gave experience in caring for the city patients during the recent epidemic of smallpox. He vaccinated about 1200 and believes in frequent vaccinations. He recommends that legislative enactment provide for the repeated vaccination at stated short intervals, by the city physician, of every man, woman, and child in every city having such an officer. It is much cheaper and more satisfactory to all than to provide and maintain quarantine for a single smallpox patient in each county.

New York County Medical Association.

April 16, 1900.

Frederick Holme Wiggin, M.D., President.

PREVENTION OF INTRACRANIAL AND INTRAVENOUS COMPLICATIONS IN SUPPURATIVE DISEASES OF EARS.

DR. J. H. WOODWARD read a paper with this title, to be printed in THE JOURNAL.

DR. FRANCIS J. QUINLAN showed the gravity of otitis media by calling attention to the fact that it was the custom at the present time among the large life insurance companies to decline to accept as a risk any person having a chronic suppurative process of the middle ear above the short process. A mastoid operation should be entirely within the reach of the skill of the average general practitioner. It is most important that it should be done thoroughly, all of the cells being laid open.

WHAT ARE THE ULTIMATE RESULTS IN TREATING CANCER OF THE UTERUS? WHAT IS THE BEST PLAN OF TREATMENT?

DR. HOWARD A. KELLY, of the Johns Hopkins University, Baltimore, Md., read a paper on this topic. It appears, with the discussion, in this and next week's issues.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, MAY 19, 1900.

THE ATLANTIC CITY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The meeting of the AMERICAN MEDICAL ASSOCIATION at Atlantic City, N. J., next month, promises to be one of the best attended of any yet held. While the West may not be so well represented as it would be were the place of meeting more centrally located, the attendance from the Eastern States will be greater than even at the Philadelphia meeting, judging from reports. The committees at Atlantic City are sparing no pains nor expense to make the meeting a successful and an enjoyable one. The hotel accommodations are ample and no fears need be had on this account.

Railroad rates—one and one-third on the certificate plan—are not satisfactory, as nothing short of half rates ever will be. It would seem that an association whose meetings are as largely attended as are those of the AMERICAN MEDICAL ASSOCIATION ought to be granted half rates on merely asking for them, but the various passenger associations seem to think differently. Every effort to obtain half rates was made by the Committee, but the peculiar location of Atlantic City, as far as railroads are concerned, made these efforts of no avail this year. The time allowed, however, is longer than usual, and this is something for which to be thankful.

The programs of the various Sections, printed in this issue of THE JOURNAL, indicate the character of the scientific work which may be expected. Evidently the officers of some of the Sections have found it impossible to limit the titles of papers to the number recommended by the ASSOCIATION at the Columbus meeting, and if all the papers are read it will mean the utilization of every minute allotted to Section work. The quality, however, is not lowered on account of the quantity in this instance, as the names on the various programs will testify.

At various times in the past attempts have been made, unsuccessfully in each instance, to have the delegates occupy a certain part of the hall in which the meetings were held. This year, instead of repeating this attempt, a distinctive badge will be provided. One will be given to each delegate at the time of registering, on presentation of credentials signed by the secretary of the society which the delegate represents. Members attending as delegates are therefore earnestly urged to have their credentials with them at the meeting. The ASSOCIATION has now become so large that a strict compliance with the constitution and by-laws seems desirable, if not necessary. It is understood that only delegates have the right to vote in the general sessions.

THE GENERAL PRACTITIONER AND THE TECHNIQUE OF PATHOLOGIC EXAMINATION.

The so-called laboratory methods in clinical diagnosis are of fundamental importance to the general practitioner, the general surgeon, the specialist, and the hospital physician alike. The necessity of the hour is to make it possible for the individual to make as full personal use of these methods as is consistent with reliable and thorough work. It is seen at once that no one is in greater immediate need of clinical laboratory methods than the general physician, and above all the general physician in the country, more or less remote from large cities. The fact is that the introduction of laboratory methods in clinical diagnosis has greatly increased the already heavy responsibility of the general practitioner. The patients in the country are entitled to the same advantages of these new methods—the earlier, more definite diagnosis and all that that means—as the more fortunately situated dweller in the city; and the community and country at large demand the same prompt protection from communicable diseases, now more surely and earlier recognized, as the more watchful city with its health inspectors, municipal laboratories, and public disinfecting apparatus. The patients in the country can not afford to wait for the report of the laboratory specialist in the city and in many cases they can not be expected to pay the extra expense thus incurred.

The general tendency, in hospital and city practice, is to bring the laboratory and clinic into the closest possible relationship. The true clinician is no longer as fully satisfied as formerly with receiving his laboratory information at second hand. The better hospitals are beginning to establish small, clinical laboratories in connection with the various hospital services or wards as distinguished from the larger, more purely pathologic laboratory. Public and dispensary clinics are making provisions for laboratory facilities of their own because they recognize fully the great advantage of obtaining the information of the microscope and of the test-tube at first hand, of bringing it into immediate correlation with the clinical manifestations and the peculiar chances of error and of delay to which such information is unquestionably subject when it has to be filtered through the mind of another person, working not in the atmosphere of the clinic but of the isolated laboratory, and private practitioners are beginning to realize that clinical laboratory work in their offices is not at all incompatible with other work. This is self-evident. There is no reason why the practitioner should not be trained in the relatively simple details of clinical laboratory work as well as in the technique of physical examination, of the use of the ophthalmoscope, the laryngoscope, and of surgical cleanliness. There is no good ground apparent why a competent practitioner should not rely on his own examination of the sputum or of the blood in the majority of cases requiring such examination just as he relies on his own physical examination in the majority of them. Why always accept

unhesitatingly the verdict, as so commonly done, of the laboratory specialist any oftener than the verdict of the specialist in "diseases of the chest?" Surely things have not come to such a condition that the practitioner must rely wholly on specialists.

If we place so much faith in laboratory methods in clinical diagnosis it is clearly our duty to bring the laboratory facilities as close at hand as circumstances permit, and that is right into our offices and our wards and our clinics. Right here the objection may be raised that thorough laboratory methods are too time-consuming, too complicated for every-day use. But all thorough work is time-consuming. A practitioner who has not the time to do his work thoroughly because of the pressure of a large and extensive practice can well afford to surround himself with young and willing assistants whose work he can supervise and control. In this problem enters also the whole question of organization of the machinery of a practice, and that is a large question which each individual must solve for himself. Laboratory methods may seem complicated to the uninitiated, but to the schooled men they are not too complicated to prevent their daily and constant use. On the other hand, considering the value of the results obtained when rightly used, they must be said to be on the whole quite simple and direct. The first requisite is good training. This the better medical schools and hospitals are now endeavoring to furnish our students, and the larger cities are offering physicians abundant opportunities in the way of post-graduate courses to acquire the knowledge and the skill that their early training and situation may have failed to supply. The next thing is suitable apparatus, the most important single item of which is a reliable microscope, then come a few stains, minor implements, and such special things as blood instruments, etc. The necessary facilities for clinical bacteriology are within comparatively easy reach. It is acknowledged that the question of culture-media may be an awkward one; they may be bought ready-made, however. In the bacteriologic laboratory the "greenest" student generally succeeds fairly well in making the more common ones the first time he tries. It may be that by placing himself in communication with the nearest bacteriologic laboratory the general practitioner, for a small outlay, could receive a fresh supply at regular intervals.

Surely it would not be too much to expect that the general practitioner, as well as the specialist, should be well enough trained to rely wholly on his own chemical and microscopic examination of the urine and to understand fully the importance of examination of the urine of patients in general and of those with certain special symptoms in particular. This, we believe, is even now fairly well recognized by the intelligent and careful physicians.

The methods of examination of the gastric contents are also within the grasp of the man in general practice.

As regards the blood, the estimation of hemoglobin, the counting and staining of the corpuscles, and the study of the fresh specimen are absolutely requisite for the diagnosis or exclusion of a number of diseases, such as chlorosis, pernicious anemia, leukemia, and malaria. It is true that in many cases a diagnosis may be made from the grosser clinical manifestations, but a complete inspection is always desirable, because it furnishes a moral support that makes the professor the master of the situation; and then there are the obscure cases that baffle solution even at the hands of the true expert. All true physicians would be thankful to know that all means within their reasonable powers may be resorted to. The conscientious use of laboratory methods soon brings home a lively sense of the real limitations of one's abilities that discourages dishonest work and the pernicious habit of guessing.

The importance of bacteriologic methods in clinical medicine needs no emphasis. The early recognition of pulmonary tuberculosis by the demonstration of the bacilli in the sputum may save suffering, expense, and even life. In view of the omnipresence of the disease and of its devastation of human life, he must be a callous individual indeed who does not arm himself thoroughly for the struggle against tuberculosis that he feels in duty bound to take up in dead earnest when he assumes the care of the health of his fellow-men. A good microscope, a little carbol-fuchsin, clean slides, and a keen sense of responsibility are essential for successful war against "the white plague," and the outcome of the first encounter rests with the general practitioner.

The definitive diagnosis of diphtheria, in its inception either as a single case or as an endemic, rests largely on the bacteriologic demonstration of the diphtheria bacillus. Should not the general practitioner in the country and the small town where there is as yet no municipal laboratory be competent to settle this question? Will not the settlement of this diagnosis, and similar ones, redound to his great credit?

Among other bacteriologic tests of great value may be mentioned the staining of gonococci in the urethral and other exudates, and the demonstration of tubercle bacilli in feces, in urine, and in pathologic products of various kinds. By following the rule laid down in the extensive article on "The Smegma Bacillus," that has just appeared in THE JOURNAL, there should be no danger of confusion of the tubercle and smegma bacilli. The bacteriologic examination of cerebrospinal fluid obtained by lumbar puncture, and of pleural and other inflammatory exudates, may yield information of decisive importance in diagnostic and prognostic problems.

One of the simplest technical methods in clinical diagnosis is Widal's reaction in typhoid fever. It is essential to have a fresh culture of the typhoid bacillus on hand, and in times when typhoid is frequent the

physician would do well to secure the necessary tubes for frequent transplantation. It is essential to know the limitations of Widal's test, and questions of that sort are frequently discussed in our leading journals.

Animal inoculations may be practiced when necessary in order to clear up obscure conditions. Rabbits and guinea-pigs are not difficult to obtain. In case the practitioner does not care to keep a stock on hand a little inquiry will determine a satisfactory source of supply. Suspected local tuberculous processes frequently demand inoculation of guinea-pigs. The operation is simple indeed, the essential requisite being ample precaution against contamination and accidental infection with extraneous microbes.

As regards pathologic tissues, such as tumors and inflammatory productions, one can say that there is no essential reason why a practitioner should not himself fix, imbed, cut and stain the material, and study it microscopically. In case this is not feasible then we certainly have the right to demand that the physician should be familiar with the proper methods of preserving the material preparatory to sending it to the pathologist. The slovenly manner in which pathologic material frequently is treated often renders the result of the microscopic examination everything else than satisfactory.

We plead for a more extensive adoption of laboratory methods in practice. It is feasible. It introduces into routine work a feature that is eminently useful at the same time that it is interesting and enjoyable. It brings the physician a few steps nearer to the secrets of disease. It renders the physician a degree or two less dependent, greatly increases his usefulness, and puts him in touch with his own era. And the young physician, starting out fully equipped to introduce laboratory methods into his practice, at once puts himself at a decided advantage over his competitors who disregard these modern refinements, but who in the eyes of the community, which is quick to see such things, soon reach the unenviable distinction of being regarded as "back numbers."

NEPHRITIS WITHOUT ALBUMINURIA, IN YOUNG CHILDREN.

He will be the most successful diagnostician who early disabuses his mind of the existence of pathognomonic symptoms. The physician, above all men, must train his powers of observation in search of the unusual, the unexpected and the atypical. Apparent paradoxes in medicine are not rare. Thus, febrile disorders are at times unattended with elevation of temperature, epilepsy with the occurrence of convulsions, uremia with the development of coma, nephritis with the presence of albumin and tube-casts in the urine, diabetes with glycosuria. It is true that such occurrences are exceptional, but it is only by an appreciation of their possibility that error is to be avoided. The belief that nephritis may exist without the presence of albumin and tube-casts in the urine receives support from some observations made by Cassel,[1] who reports a series of nine cases in children in whom, in the absence of disease of the heart, and without a previous history of scarlet fever, widespread anasarca was present, in three also with ascites, while the urine was free from albumin and abnormal morphologic elements.

In two of the three cases that terminated fatally, post-mortem examination disclosed the existence of nephritis. The patients were all young, one being 7 weeks, four 2 months, one 5 months, one 1½ years, and one 2½ years old. In some the anasarca was present when the children came under observation, while in others it developed during this time. The dropsy appeared first in the face, then invaded the dorsum of the hands and the feet, extending to the legs and the thighs, the scrotum or the vulva, and at times to the dependent portions of the back. In two cases the edema had been preceded for two weeks by a vesicular eruption, probably varicellous. In a third case measles developed after the dropsy had been present for two weeks, but the latter was uninfluenced by the complicating disorder. In five cases, however, the hydrops had been preceded by digestive disturbances of acute or subacute character. In one case no etiologic factor whatever could be elicited. Scarlet fever could be excluded with certainty in all. Four cases terminated in recovery in from four to six weeks. In two the results could not be learned and in three death occurred. The urine, obtained by catheterization at different times of the day and night, was pale, of acid reaction and low specific gravity. Tested with acetic acid and potassium ferrocyanid, and by the nitric-acid contact method, it failed in every instance to yield the response for albumin. There was no sediment and none could be obtained on centrifugation. Cassel has succeeded in collecting, from the literature, reports of a number of observers who relate cases of nephritis in which albumin and sometimes also tube-casts could not be found in the urine. In these cases, however, the renal condition was usually a sequel of a preceding disease, such as scarlet fever principally, but other exanthemata also were antecedent in some cases, such as chicken-pox, measles and typhoid fever. It is possible that other infectious diseases also may be attended with the same sequel. The suggestion has been made that the hydrops under the conditions just considered is due not to disease of the kidneys, but to increased permeability of the blood-vessels and the lymphatics of the skin, serous membranes and mucous membranes. A similar explanation may also be applicable when the anasarca attends gastrointestinal disorders, although it has been shown that these may give rise to actual nephritis.

MEDICAL RECIPROCITY.

The necessity of uniformity and reciprocity in medical standards and state qualifications for practice is daily becoming more and more evident. Medical re-

[1] Berliner Klin. Woch., March 5, p. 213.

form is in the air, but it progresses everywhere, largely on distinct lines, and the results are therefore in some regards not all that could be wished. One state does not recognize the qualifications of another, and vice versa, and the outcome is discord and a reflection on the medical standards and the general status of American medicine. If we discredit each other individually, outsiders will discredit us collectively. Aside from this there are still more obvious disadvantages in this lack of reciprocity, not the least of which is the need of re-examination on change of residence, and the manifold inconveniences it involves. Everybody must admit that a uniformly high standard is the ideal and that even the suspicion that we fall short of this reflects discredit on us all. If New York will not recognize Pennsylvania's qualifications, Pennsylvania may retaliate in kind on New York, and both reject those of other parts of the country, and outsiders ignore the whole. It is true that in many states the law authorizes reciprocity in this matter of medical qualifications, but this does not materially improve the case. If the Federal government could assume the control of medical practice, this would be the simplest solution of the problem, but it is one of the disadvantages of our national organization that the Federal jurisdiction is limited in this regard, and it would not be altogether advantageous to our profession in any sense, could construction be placed on certain passages of the Constitution to make them include such jurisdiction—they would include too much.

We have before us the more complicated and difficult task of securing uniform action of the different commonwealths that make up our Union. To do this will require the united action of the medical profession and this, properly exerted, would be invincible. It can only be thus exerted by united action of authorized representatives of all states acting together in a definite, organized body. Anything short of complete uniformity in the medical laws of the various states will be only a partial success, and should not be even the alternative ideal. The difficulties in the way need not be ignored, but they are not insuperable and ought only to stimulate our efforts. There is hardly any subject that more deserves to be seriously considered at the coming meeting of the ASSOCIATION, and we trust it will be thoroughly handled and measures initiated to this end. Two things are certain: One is that this reform must be brought about, the other is that it must be done by the medical profession. As long as each state has its own independent standards and produces physicians only fitted to them, the reputation of American medicine as a whole will continue to be depreciated as in the past.

ALCOHOL IN THE TROPICS.

An army surgeon, in a paper in one of our contemporaries,[1] has expressed the opinion, contrary to that issued from the army headquarters, that the use of intoxicating drink is essential to continued health in the tropics, and another, a surgeon of volunteers, in the same issue, though his opinion is modestly given as the result of only one year's experience in active service in the same region, maintains the directly opposite view; he is certain that, as Americans drink it, strong liquor is injurious. The native liquor of the Philippines causes, he says, in its habitués, loss of appetite, fever and diarrhea, and the same results from the irregular American habit of drinking generally. His belief is that "the use of liquor in any form in the tropics is unnecessary, except it be the red wine issued by the Spanish Government to their troops." Judging from the condition and efficiency of the Spanish troops this would not seem to have helped them much. The doctors, however, do not disagree in this matter more than do experienced laymen. In a very limited tropical experience we have heard the most divergent views on this subject from white men there resident, and some who favored alcohol in one form insisted on its deadliness in another. There would seem to be hardly any question of tropical medicine much more important than this, and the burden of proof is certainly on those whose views are opposed to the generally received opinions and statements of authorities.

[1] Phila. Med. Jour., April 7.

PRIMARY SARCOMA OF THE INTESTINE.

Based on 29 cases from the literature and three personal ones—32 in all—of primary sarcoma of the small intestines, Westermark[1] gives the following general statements concerning this form of tumor. As regards frequency, Smoler's statistics show primary sarcoma of the small intestine 11 times in 13,036 autopsies, a percentage of .08. The majority of the recorded cases occurred in persons of the poorer classes. The tumor may be congenital; it has been observed at the age of 70; it is more common before the fortieth year. Of the 32 cases but 8 occurred in women. The growth usually begins in the submucosa, whence the outer coats are involved, the serous remaining intact the longest. At times the growth is nodular, forming subserous masses of varying sizes; or it may appear as a flat, circular infiltration of the intestine, part of which appears to have changed into sarcoma tissue; at other times the growth encroaches on the lumen of the intestine, forming submucous and subserous outgrowths. In a small proportion of the cases the sarcoma has occurred as multiple tumors. Retrogressive changes and hemorrhages are frequent, beginning either on the mucous surface of the tumor or in its interior. Soft tumors may give rise to dangerous intraperitoneal hemorrhages from rupture caused by ordinary palpation. Generally the lumen of the intestine corresponding to the tumor is dilated, the wall losing its elasticity and contractility; in some cases the dilation was very pronounced. In one of Westermark's cases there was an invagination of the degenerated region into the healthy intestine below. The lower part of the small intestine is more frequently involved than the upper part, and round-celled sarcomas are the more common. The course is rapid, and metastases form early. The most pronounced symptoms are cach-

[1] Phila. Med. Jour., April 7.

exia and loss of strength. In one case of removal by operation the patient remained well for a year, but little is known concerning more remote results. In most of the cases operated on recidivation has occurred in a short time.

STATE ENDOWMENT OF MEDICAL EDUCATION.

A distinguished New York physician and medical educator is quoted as saying: "I hold that the state ought to furnish sufficient funds for the adequate and thorough instruction of all the pupils in every medical institution already legally organized, and for such others as the increase of population may cause to be established under the regulation of the state." It would be injustice to the gentleman to assume that this was other than an undeliberated utterance, since he and every one else in the profession must realize that it would be a very extensive contract for the already burdened public to assume the support of the numerous medical colleges of the country. If there is one thing in which American medical education leads the world, it is in its quantity, but we do not congratulate ourselves on this fact. What we need is improvement in quality, and it would be no loss if three-quarters of the hundred and fifty, more or less, medical colleges of all sorts in this country should go out of business. What the doctor probably meant, but what unfortunately it appears he did not say, was that the state should insure a uniformly thorough scientific medical education in those seeking it, and this necessarily implies a regulation of the standards of education that would be fatal to the success of many of the minor institutions that can command neither the clinical facilities nor the teaching ability that would be required. Whether this can be done uniformly in all the different commonwealths that make up our country is a problem that remains to be solved; that it is desirable no one questions. His remarks also implied that the state should endow and encourage scientific medical research, another thing to be desired, and which it can do to a certain extent though not so universally as he would seem to think. What we do need is endowment of medical instruction, and lifting it above what it is at present to too great an extent in this country—simply a means of nonprohibited medical advertising. Our medical colleges have been too long originated and conducted as business investments, not always for their direct returns, but to supply from their output a consulting clientele for their professors. The stock company medical college, described by a prominent neurologist in the '70s, was a caricature with a broad family likeness to many of the institutions of the time, and there are still in some quarters relics of the same features amongst the medical colleges of to-day.

TUBERCULIN THERAPY.

The use of tuberculin in the human subject, either for therapeutic or diagnostic purposes, has as yet no recognized standing with the profession, and there is a very wide-spread suspicion that it may sometimes revive latent foci and thus arouse at once, what is for the time, at least, a harmless condition into a dangerous state of disease. It has, however, its advocates, and among them we may include, in a somewhat qualified sense, Dr. Edward R. Baldwin,[1] Saranac Lake, N. Y., who thinks that clinical experience, as well as experiments on animals, shows that it "can favorably influence a pure localized pulmonary tuberculosis and lupus in a well-nourished afebrile patient," but does not, he says, presume to decide whether tuberculins of any sort should be favored for limited therapeutic employment in the light of our present knowledge. This is, indeed, a very qualified endorsement, but it leaves the decision of the question to the individual therapeutist, who can use it to justify himself in any course he may adopt. It should be added here, however, that he thinks it obvious that this treatment should be limited to institutions, and that the patients should be observed through a series of years. He considers that the action of the tuberculin is in aiding the defective powers of the organism by stimulating the secretion of ferments which attack the tuberculous toxins. It is not established that they are more effective in this way than certain other irritants, such as cinnamic acid or nucleins, but the possibility of producing a toxin immunity makes it more rational to employ a specific irritant. The difficulties and the dangers, however, of thus obtaining any immunity from tuberculins are, he admits, such as leave it practically out of consideration. The question is, therefore, reduced to whether or not we can aid Nature in her contest with the tubercle bacilli by measures that increase hyperemia and absorption. He answers this with, as usual, a qualified affirmative, and quotes, as instances, the effects of laparatomy on tubercular peritonitis, Bier's method of treating tuberculous joints by manipulation, and the action of the X-ray on lupus. The serumtherapy of tuberculosis is mentioned, in conclusion, as still in the experimental stage; and Baldwin is not without hope of results of practical value.

Medical News.

DR. A. GARCELON'S ANNIVERSARY.—We clip the following, concerning the president of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION, from the Lewiston (Me.) *Journal*:

"Dr. Alonzo Garcelon, of Lewiston, who needs no introduction to the people of the State of Maine, will measure his eighty-seventh milestone on Sunday, May 6. The *Journal* and the citizens of Lewiston and Auburn congratulate the Doctor upon the unusual health and strength which he enjoys to-day. Robust and vigorous, Dr. Garcelon still carries on his practice in these cities and in the surrounding country, and is as light of heart and as jovial company as in the years long gone by. His familiar figure is one that attracts attention upon the streets, being of statesmanlike type of such an earlier period in American history as that of Henry Clay, Calhoun and Webster. Then another characteristic of the Doctor is his great love of good horseflesh. In his stables have always been found some of the finest blooded animals in the two cities, and his old-fashioned chaise has always followed some mighty fast clippers over these country roads. A great lover of travel of any kind, Dr. Garcelon, only this year, made a trip west, covering over 6000 miles. After attending a medical meeting at Chicago, he enjoyed a little side journey for

[1] Phila. Med. Jour., May 5.

pleasure, to Denver and other places in Colorado, where he was entertained right royally by his many friends. On his way back, Minneapolis, Chicago, New York and Boston were visited, the whole trip being of several weeks' duration. While in Denver, the Doctor had occasion to call upon some friends, but, not having announced his coming, he found them in the midst of a dinner party. The welcome was most cordial. The hostess escorted the Doctor into the dining-hall, and he at once became the most honored guest of the occasion. Introductions were made, and Dr. Garcelon for over an hour entertained the party with delightful reminiscences and stories gleaned from his long and active service in the world. The whole event is said to be one of the happiest in the memory of those present. Again we congratulate the Doctor. Long live one of our most esteemed citizens!"

INTERNATIONAL ANTITUBERCULOSIS CONGRESS.—More than 1200 members assembled at this congress, in Naples, April 25 to 28, a brilliant gathering of the scientists of continental Europe. It was more especially a trinational than an international assembly, as not a single American or English name appears on the official program of addresses, although all nations were officially represented on the platform. Among these representatives our correspondents mention the names of Drs. Heiser and Willson of this country. In his opening address Baccelli stated that Italy is the most favored land in Europe in respect to tuberculosis, quoting statistics to show that in 1894, when Prussia lost 71,000 inhabitants from tuberculosis and Austria not less than 88,000, the deaths in Italy from this cause were 30,000. He added that old healed tuberculous lesions are found at a third at least of the autopsies in Italy, showing the marked tendency to recovery from the disease in that climate.

De Renzi outlined "The Present Status of the Treatment of Tuberculosis," placing all drugs in the second rank far below prophylaxis and hygienic measures in importance. The two medicines that are considered most effective are creosote and iodin, but the only effect of the creosote is to diminish expectoration, as it would be impossible to administer it to a patient in amounts sufficient to actually destroy the Koch bacillus. It benefits the sympathetic bronchitis but has no influence on the tuberculous processes at practicable doses. Iodin has evidently a favorable effect on local tuberculous processes, but has given conflicting results in experimental research. The Maragliano serum may prove beneficial in light cases. Patients with moderate tuberculosis, under treatment with this serum do not react as usual to injections of tuberculin, which demonstrates that they have acquired a certain resistance to the bacterial toxins. De Renzi's experience with "thiocol Roche" during the last year has been extremely favorable, and he considers its action superior to that of creosote or guaiacol. He concluded by reporting the excellent results he has attained with electric-light baths. Nine patients have been cured and others improved. The beneficial action may be due to the sweating induced. He has established that the sweat of tuberculous subjects is more toxic than in health. Besides the disappearance of all the morbid phenomena, injections of tuberculin failed to produce any reaction after this treatment. He recommends it as a valuable adjuvant to the indispensable hygienic measures, among which he includes pure air, absence of fresh infection, abundant food and gentle exercise. He does not approve of too much repose, and observes that confined air produces an intoxication of the organism which renders it a peculiarly favorable soil for the development of the Koch bacillus.

Senator exhibited a device for disinfecting the air in industrial establishments, and Ausset proposed that all houses for rent should keep a health record book to serve as a sanitary passport for the habitability of the house. The organization of special tuberculosis dispensaries in cities was advocated by several, and it was observed that sanitarium and dispensary treatment is only a fraction of the task to be accomplished, which should include the support of the patient's family and change of occupation.

Santoliquido, the chief of the sanitary service in Italy, announced that steps are now being taken for the compulsory notification of tuberculosis in poor-houses, dairies, etc., and also in cigar factories. Tuberculous employees are to be excluded from the latter and the state will provide a support for employees thus deprived of a means of earning their livelihood. The Congress voted to establish a permanent trinational committee for the campaign against tuberculosis, and the Duke von Ratibor was appointed to represent Germany; Lannelongue, France, and Baccelli, Italy. They are empowered to elect an equal number of coadjutors to form the "International League Against Tuberculosis."

The numerous festivities included a trip to Pompeii, where the excavations have been carried on of late with enthusiasm and skill, under the supervision of that eminent member of the profession, Guido Baccelli, who, in his official capacity as minister of public instruction, has had the domestic life of Pompeii resurrected by restoring the famous Vettio mansion, discovered in 1894-95, which has many features of peculiar interest to physicians and sanitarians. The Exposition of Hygiene was inaugurated about the time of the Congress.

NEW YORK.

UNSANITARY PRISON CELLS.

A report on the condition of our state prisons has just been made by a committee consisting of Drs. Austin Flint, J. G. Phelps Stokes, J. Murray Mitchell, J. Seeley Ward, Jr., Eugene Smith, F. P. Bellamy, Henry E. Gregory and William M. F. Round. Referring to the cells at Sing Sing, the report says that the size of the ordinary cell is 3 feet 3 inches by 6 feet 6 inches in height, and 7 feet long, and that there are 1200 of these in a room 60 by 400 feet. In addition to this insufficient breathing-space, the lighting by day is poor, and the prison is overrun with vermin. Auburn prison is not quite so bad, but it is poorly lighted and ventilated, is dangerous in case of fire, and has insufficient sanitary arrangements. Dannemora prison is described as being much cleaner and better in every way, though not what it should be. The discipline was noted to be decidedly lax in Sing Sing, a little better at Dannemora, and excellent at Auburn. This committee, which was appointed under the authority of the supreme court, declares these prisons to be a disgrace to a civilized community.

New York City.

A NEW FIVE-STORY brick and limestone building, costing about $125,000, is to be erected for Beth Israel Hospital.

A MAN, 65 years of age, recently died here of exhaustion from persistent hiccough, which had lasted about a week, and had resisted all attempts at its control.

THE QUARTERLY report to the president of the Board of Health, for the period ending March 31, shows 221 deaths from la grippe, as against 263 from that disease in the same period of 1899; also 2486 from pneumonia, as against 1654 in 1899.

GIFT TO FLOATING HOSPITAL.

MRS. AUGUSTUS D. JUILLIARD, who has already given the new floating hospital—the *Helen C. Juilliard*—to St. John's Guild, has now donated $50,000; the interest from which is to be used in defraying the expenses of this hospital. The guild has been still further aided in its work by a gift of $9046.89 for the erection of a new cottage at the Seaside Hospital, New Dorp, S. I., given by Mrs. Frederick Elliott Lewis in memory of her little son. In the summer of 1899 the guild expended $60,000 in the care of 82,842 infants, and it proposes to increase its work the coming season.

CONFERENCE ON CHARITIES.

An informal conference on charities has just been held. Dr. George G. Wheelock presented a paper discussing the topic, "Are Public Institutions Adequate to Public Needs?" He said that while there has been some improvement in the department of charities since it was separated from the correction department, still this improvement has been very slow. There has been a decided decrease in the number of inmates in the almshouse, there having been, on Oct. 1, 1899, 743 vacant beds, and there is great need for a convalescent hospital. Fordham Hospital he characterized as "a lamentable instance of an unwise if not culpable expenditure of the city's money." Charities Commissioner Keller, in his address, declared that the most glaring need in his department is a new building to take the place of the miserable and outrageous makeshift now known as the Harlem Hospital.

PENNSYLVANIA.

WORK HAS been commenced on the new wing of the Lackawanna Hospital at Scranton.

A RESIDENT of Erie was bitten by a cat about five weeks ago, and died May 11 with symptoms of hydrophobia.

TWO CHILDREN living at Allentown swallowed a quantity of butter coloring matter, from the effects of which toxic symptoms developed and one child died.

A MAN, aged 50 years, who had for nearly ten years been isolated at the county house near Media, died on May 9. He came to Pennsylvania in 1887, and, knowing that he had leprosy, jumped from the vessel as it was coming up the Delaware River, and swam ashore to escape the sanitary officers. He stated that he had inherited the disease from his mother.

Philadelphia.

CHARLES LAWRENCE, superintendent of the Philadelphia Hospital, has tendered his resignation.

A LECTURE was delivered by Dr. Simon Flexner at the Museum in Widener Hall, May 10, on "Impressions of the Philippine Islands."

BY THE will of Mary Baker, $5000 has been left the Philadelphia Hospital for Women, as an endowment of a free bed; $1000 was left to the Methodist Hospital for the same purpose.

DR. R. N. WILLSON recently delivered an address before the International Convention for the Prevention of Tuberculosis, which was held in Naples.

DRS. H. B. ALLYN and DAVID RIESMAN have been appointed members of the medical staff of the Philadelphia (Blockley) Hospital.

THE COMPETITIVE examination for positions on the staff of the Philadelphia Hospital will occur May 22. The examining board will consist of Drs. James M. Anders, John H. Musser, A. H. Hulsburgher. Sixteen resident physicians will be chosen.

UNIVERSITY HOSPITAL.

Provost Harrison, of the University of Pennsylvania, recently appeared before the Board of Supervisors to advocate an ordinance to strike from the city plan, Pine Street from Thirty-fourth to Thirty-sixth Street, in order that needed enlargement of the University Hospital may be made. Otherwise a gift of $50,000 can not be accepted on account of the lack of ground on which to build.

MORTALITY STATISTICS.

The number of deaths during the past week was 494, a decrease of 23 from the previous week, and an increase of 90 over the corresponding period of last year. The principal causes were: nephritis, 26; cancer, 6; tuberculosis, 57; diabetes, 1; heart disease, 32; influenza, 5; appendicitis, 4; pneumonia, 69; peritonitis, 5; septicemia, 4; suicide, 6; tetanus, 1.

PENNSYLVANIA HOSPITAL.

The 149th annual report of this hospital has been made. The total number of cases treated in all the wards, not including the department in West Philadelphia, was 36,126. In the insane department, 619 were treated. The expenses of the Pine Street Hospital were $116,790.30; the West Philadelphia Hospital for men, $95,843.32; the Hospital for Women, $125,490.18. The principal contributions received during the year were: from Frederick F. Ayer, $25,000; Samuel J. Sharpless, $10,000; Estate of George Plumer Smith, $10,000; and $5000 each from John T. Morris, Elizabeth Baker, estate of Catherine Thorn, Clara Galli and Dr. Joseph Kirkbride. The total contributions amounted to over $89,500. The sum of $7966.50 was paid by the Government for the treatment of soldiers during the late war.

MARYLAND.

Baltimore.

DR. THEODORE COOK, JR., has been reappointed physician to the penitentiary.

DR. FREDERICK LAWFORD has been appointed assistant physician to Bayview Hospital.

DRS. WM. B. BURCH, John S. Bishop, and John T. McCarthy have been appointed on the board of police surgeons.

PROF. W. H. WELCH, Johns Hopkins University, has been appointed one of the judges of the Hall of Fame, New York University.

THE WOMAN'S Medical College graduated four women on May 7. Miss Willena A. Peck, of Massachusetts, received the gold medal. The address was delivered by Rev. Dr. J. B. Van Meter, Dean of the Woman's College of Baltimore.

PUBLIC BATHS.

The mayor has approved the city ordinance appointing a commission to take charge of the public baths in Baltimore. Among the seven names on the commission, three are those of physicians: Drs. John S. Fulton, Mary Sherwood and Joseph C. Gichner. Henry Walters has turned over to the city the public baths on High Street, which he has given to Baltimore.

UNIVERSITY HOSPITAL.

The following appointments have been made at the University Hospital: medical superintendent, Dr. S. P. Latane; vice Dr. Spruill, resigned; assistant resident physician, Dr. G. A. Stewart, vice Dr. Fitzhugh, resigned; and Dr. H. Smith, resident surgeons, Drs. Thos. McGreen, A. C. Mathews, and A. C. Hoyt; assistant gynecologists, Drs. C. D. Snyder and C. A. Beck; assistant resident physician and ambulance surgeon, Dr. H. A. Naylor.

VACCIN PHYSICIANS.

The health commissioner made his assignments of the twenty-four vaccin physicians on May 9. Heretofore each of these received $200 a year for this, and $100 additional for services at police stations. Under the new law one physician is appointed from each ward to serve as vaccin physician and health warden or sanitary inspector, and medical attendant at the station house. The twenty-four are divided into groups of three, each group to have charge of one of the eight police stations, to look after the health of the prisoners there, and treat minor accident cases. There is some trouble about the salary, owing to insufficient appropriation, as the law allows the health commissioner to pay as much as $900 a year, and he will not be able to pay the full amount this year.

DISTRICT OF COLUMBIA.

NATIONAL LEGISLATIVE CONFERENCE.

The first meeting of the National Legislative Conference of the AMERICAN MEDICAL ASSOCIATION was held here May 1 and 2, pursuant to the resolution of the ASSOCIATION at its Columbus meeting. The Conference was formally called to order by the Chairman, Dr. H. L. E. Johnson, who stated the object of the meeting. After some general discussion on the

subjects to be considered, the delegates decided, on motion of Dr. Welch of Baltimore, Md., to adjourn to meet the following day, at which meeting the following members were present: Drs. H. L. E. Johnson, representing the ASSOCIATION Committee and the Medical Association of the District of Columbia; Wm. H. Welch of Baltimore, and Wm. E. Rodman of Philadelphia, representing the ASSOCIATION Committee, and the following members representing the states, U. O. B. Wingate, Wisconsin; W. P. Goff, West Virginia; L. B. Tuckerman, Ohio; George Evans Reading, New Jersey; Gustav Eliot, Connecticut; F. J. Tina, Texas; H. M. Bracken, Minnesota; Surgeon-General Wyman; Surgeon-General Sternberg; John B. Roberts, Pennsylvania; George H. Simmons, Nebraska, and Henry Sewall, Colorado. The general matters discussed were "The Department of Public Health," "The Publication of the Index Medicus," "The Antivivisection Bill," "Unification of Medical Practice Acts," Senate bills 4200 and 4274, providing for contract surgeons, and H. R. bill 4483, providing increase in the medical department of the army; H. R. bill 1139 and Senate bill 4171, referring to quarantine, and Senate bill 559, providing for purification of water-supply. The committee of five, consisting of Drs. H. L. E. Johnson, Wm. H. Welch, L. B. Tuckerman, H. M. Bracken, and W. P. Goff, was appointed to wait on the committees of Congress having in charge the bills designated, and urge their prompt passage. The Committee will make a full report to the AMERICAN MEDICAL ASSOCIATION at the June meeting.

ILLINOIS.

SEMI-CENTENNIAL ANNIVERSARY.

Officers of the Illinois State Medical Society were elected May 16, as follows: president, G. N. Kreider, Springfield; first vice-president, Weller Van Hook, Chicago; second vice-president, Denslow Lewis, Chicago; assistant secretary, O. B. Will, Peoria; treasurer, Everett J. Brown, Decatur. The semi-centennial of the society was celebrated in the evening, with a reception and banquet, J. H. Hollister of Chicago officiating. Toasts were responded to as follows: "The Founder of the Illinois State Medical Society," Robert Beal and L. C. Thompson, both of Lacon. "Medical Education for Fifty Years in Illinois," N. S. Davis, Chicago; "Then and Now," James T. Stewart, Podunk; "Reminiscences of Early Day Practice and Hardships of the Pioneer Doctor," W. J. Chenoweth, Decatur; "The Parson to the Doctor," the Rev. D. F. Howe, Springfield; "Reminiscences," C. C. Hunt, Dixon; "Law and Medicine," Judge Charles P. Kine, Springfield; "The Ideal Physician of the Future," F. P. Norbury, Jackson.

Chicago.

A MAN here ruptured a blood-vessel in his head during a severe attack of coughing, death resulting.

PROPERTY ON Forty-ninth Street, near Cottage Grove Avenue, has been transferred to the Chicago Hospital Building Company for a consideration of $75,000. The building will be renovated and refitted. Dr. Alexander Ferguson is president of the company and chief of the medical staff.

TWO DEATHS have occurred at the Dowie institution the past week. As both were probably preventable, radical measures will be instituted by the State Board of Health.

PERSONALS.

Drs. John A. Robison, Adolph Gehrmann, John Hollister, N. S. Davis, J. S. Gill and Daniel R. Brower attended the State Medical Society, just held in Springfield, and presented papers on various subjects. Dr. N. S. Davis is the only living member of the sixteen delegates who were present at the first meeting.

WESLEY HOSPITAL.

The following staff has been appointed for Wesley Hospital: Professors Davis, Edwards and Webster, in medicine; Van Hook, Plumer and Schroeder, in surgery; Dudley and Mergler, in gynecology; Gradle and Allport, in eye and ear; Casselberry, in nose and throat; DeLee in obstetrics; Ridlon, in orthopedics; Danforth, in renal surgery; Hatfield, in children's diseases; Fütterer, pathologist; Zeisler, in skin diseases; Church and Patrick, in nervous and mental diseases. This institution is devoted entirely to clinical teaching, the services being almost entirely made up of charity cases.

MORTALITY STATISTICS.

There were 527 deaths in the week ending May 12, 39 more than the preceding week and 24 more than in the corresponding period of 1899. The chronic diseases were chiefly responsible for the high mortality. Pneumonia and typhoid fever were also in excess of the preceding week, and there were 15 deaths from measles—the greatest number reported for any week since the weekly mortality records have been kept.

OHIO.

DR. WILLIAM T. GEMMIL, Forest, has been elected president of the State Board of Health.

THE COMMENCEMENT exercises of the Medical College of Ohio were held in Cincinnati, May 7. Prof. Howard Ayers, president of the University of Cincinnati, made the address, and awarded the diplomas to sixty young men. Prof. Jos. Ransohoff made the valedictory address.

REGISTRATION AND EXAMINATION.

Representatives of the different schools of medicine in the state met recently with a committee from the Board of Medical Registration and Examination and discussed the qualifications of those asking for admission to the colleges, and the date of opening. The meeting was the first of its kind, but will hereafter be an annual affair, and will be held at the time of the meeting of the Ohio State Medical Society.

ALUMNI MEETING.

At the annual meeting of the alumni association of the Cleveland College of Physicians and Surgeons the following officers were elected: president, Dr. N. S. Everhard, Wadsworth, Pa.; second vice-president, Dr. G. B. Woods, Washington, Pa.; second vice-president, Dr. H. N. Powers, North Amherst, Ohio; third vice-president, Dr. H. C. Crumvine, Cleveland; secretary, Dr. H. B. Ormsby, Cleveland; treasurer, Dr. I. N. Hentzelman, Cleveland.

INDIANA.

A NEW SANITARIUM has been opened in Terre Haute, under the management of Drs. Samuel D. Weir and Louis K. Stock.

THE MAYOR of Logansport issued a proclamation, May 4, ordering citizens to be vaccinated at once; and the State Board of Health has ordered the erection of a pest-house. A case of smallpox in a boarding-house has made these precautions necessary.

KENTUCKY.

COLLEGE CHANGES.

The Board of Curators of the Central University of Kentucky, realizing that it would be more advantageous to have the Louisville College of Dentistry run independent of the Hospital College of Medicine has decided to separate the two. A new building is being erected for the Louisville College of Dentistry. The architect made a personal examination of the different dental colleges of prominence before preparing the plans for this one. It will be four stories high, and devoted solely to dental instruction. Work has begun on the new building and it will be ready for occupancy October 10, when the next session opens. The building and general management of the department will be in the hands of officers selected, because, by experience for many years, both in active practice and intimate connection with dental colleges, they are especially fitted to take charge of the institution.

MICHIGAN.

AT THE meeting of the board of trustees of Butterworth Hospital, held May 7, in Grand Rapids, a new medical staff was appointed.

Detroit.

THE NEW staff at the Harper Hospital is: G. B. Lowrie, house physician; T. F. Heavenrich, S. G. McDonald, R. T. Mason, Dugald Ferguson and W. N. Wilkinson, assistants.

DETROIT COLLEGE OF MEDICINE.

The thirty-second annual commencement exercises of the Detroit College of Medicine occurred May 10. Dr. W. P. Manton

addressed the class on the subject, "Posthomo Shadows in Medical Science," and Judge J. W. Donovan on "Opportunities." At the alumni meeting, Dr. Don Campbell, of Detroit, was elected president; Dr. E. D. Rice of Flint, vice-president.

LOUISIANA.

DR. J. G. DEMPSEY has been appointed visiting physician to the out-door poor of Truro Infirmary.

THE CITY council of New Orleans has passed an ordinance regulating the management of dairies, with penalties for non-observance. The dairy farms have heretofore been in a very unsanitary condition, and a great improvement is hoped for in the future.

CALIFORNIA.

DR. VINCENT BUCKLEY, of San Francisco, has been appointed to fill the vacancy on the board of health, caused by the resignation of Dr. W. E. Hopkins.

MRS. PHOEBE HEARST has presented to the University of California a complete equipment for the department of medicine, and Dr. Alonzo Taylor is in Germany purchasing the apparatus.

CANADA.

HEALTH PRECAUTIONS.

The Provincial Board of Health of Ontario met May 8 and 9. Among other matters up for discussion and action was that of lumpy-jaw in cattle, and the secretary, Dr. Bryce, was ordered to notify the health officer of Prescott, that any cattle shipped back from Montreal, where the disease had been discovered, as reported to THE JOURNAL a few weeks ago, should be immediately slaughtered. The Board upheld the action of the health officer of Fort William, who prevented a child with tubercular glands in the neck from attending school.

UNSANITARY STREETS.

The unsanitary, dusty streets in Montreal are again causing trouble and caustic comment. The city is so full of scarlet fever as to almost amount to an epidemic; and it is not confined to the poorer classes in the "scums" of the city, for many of the children of the better classes are also victims. The dust of the streets is swirled into the meat shops and provision stores and peppers the foods, so that that which was pure and wholesome becomes polluted and poisonous. It is thought that in this way the large amount of infection arises; but the existing state of affairs continues and the city fathers are being savagely criticised for their negligence in not keeping the streets properly swept and cleaned.

PHYSICIANS' AND SURGEONS' SYNDICATE.

Dr. J. W. Shaw, Clinton, Ont., at the last meeting of the Huron Medical Association, in April—an Association which, some fifteen years ago, Professor Osler denominated the best of its kind in Canada—brought forward an idea, which though not perhaps new, will bear close and careful scrutiny at the hands of the profession. It is a plan for cheapening drugs and supplies to physicians and surgeons, and at the same time for profit and perfection in the remedy. It is proposed that a physicians' and surgeons' syndicate be established among doctors, with a capital of $50,000, in $10-shares, one physician not to possess more than twenty shares. A supply-house to be opened at some central point, with a competent manager and chemist, from which source all that pertains to the practice of medicine shall be obtained, at a wholesale price to the physician, would necessarily form an important part of the undertaking. The members of the corporation would all have to deal with this house, and share in whatever profits materialized. The accomplishment of some such scheme would do away with travelers wasting the physician's time, a practice which has almost become unbearable; and whatever financial profit there is to these houses would all revert to the doctor. The proposition was well received by the Association, and there is a likelihood of it receiving still further elaboration at an early date.

SMALLPOX AT MONTREAL.

Montreal is fearful of another epidemic of the dreaded disease. In 1885, when the city was decimated and ravaged to an alarming extent, and something like 3500 people succumbed to the sickness, a lesson was taught the sanitary authorities, which their successors ever afterward do not fail to appreciate. The disease, as previously announced in this correspondence in THE JOURNAL, was brought to the city by a young man coming from Rossland. He occupied a berth in the sleeper directly opposite to one of the victims of the disease at Winnipeg. On arriving at his hotel in Montreal the nature of his trouble was discovered. The whole staff of the hotel was immediately vaccinated, but not before two others of the employees had become infected. Another employee took sick and was sent to the General Hospital, suffering from apparent pneumonia; but the medical superintendent met the case at the hospital doors and diagnosed it smallpox. It was turned over to the Civic Hospital. A doctor has been put in special charge of these cases, another of which has since developed; and the financial committee of the city council has placed at the disposal of the hygienic committee unlimited funds to enable them to ward off all chance of an epidemic. So far all are of a mild character.

Correspondence.

Length of Medical College Curriculum.

HYDE PARK, VT., May 8, 1900.

To the Editor: In view of the coming meeting of the ASSOCIATION and action on the Amendment to Article 2 of the Constitution, proposed by Dr. Reynolds, viz.: "That no state, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 receive the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent requirement," I would like to suggest, as a member who will not be able to attend the meeting, that the proposed amendment be changed to read—"who may after 1903 receive the degree of Doctor of Medicine on less than four years of graded instruction, to include at least eight months' attendance at lectures and clinics each year, or an equivalent requirement."

This is offered in view of the fact that all of our leading universities, including such schools as Johns Hopkins, Harvard, Cornell, Columbia, Yale, Jefferson, the universities of Pennsylvania, Michigan, California, Minnesota, Virginia, Missouri, Texas, Chicago and twenty-six other schools, now require attendance on annual sessions of eight and nine months, while there are any number of others keeping the requirements down to six months' annual attendance. On the other hand, every medical school in the country except four or possibly five, which includes the two Georgia schools, has raised the requirements to a four years' required attendance, but, in case of all the southern schools except the university of Texas and one or two others, this requirement only applies to students who matriculate after Jan. 1, 1900, and who receive their degrees after July 1, 1903. To have this amendment apply to all receiving their degree after 1900 would in effect exclude the graduates of nearly every southern school and a number of northern schools who graduate during the years 1901, 1902 and 1903, while to require all graduating after 1903 to have attended four years of eight months each would be giving a fair warning. The extension of the course to eight months could be adopted at the coming session or at the beginning of the session of 1901-02, thereby making the time requirements uniform throughout the country and keeping harmony in the ranks.

It would seem as though the six months' schools extend the time to eight months for their own protection, as the graduates of some of them do not make a very creditable appearance before the numerous examining boards in comparison with those having longer sessions; and how can they, as attendance on annual sessions of eight months means, in four years, eight months' extra work in lectures, recitations, clinics and laboratory? However, in spite of this, some of them will not extend their sessions to eight months until compelled to do so.

Perhaps that would be as far as we ought to go at present, but I would very much like to see, in addition to the above, a requirement that all graduating after 1903, applying for recognition from the ASSOCIATION or its auxiliary bodies, be required to produce evidence that they have had a preliminary education equal to that obtained in a first-grade high school course, as is now required by law in the states of New York, New Hampshire and Ohio (Amendment to Statute passed April 14, 1900).

Johns Hopkins requires a degree in arts, literature, or science for admission. Harvard will require the same from all entering after September of this year. After 1901 the Western Reserve University, Cleveland, Ohio, will require the completion of the junior year in a recognized college, for admission to its medical department, and after 1903 the University of Chicago (see THE JOURNAL, April 21, 1900, p. 1014.) and the University of Minnesota will require the same. While too much can not be said in favor of the adoption of a collegiate education as a standard for admission by our leading universities, still, it would seem that it should be left to the judgment of the individual school, and that the completion of a high school course should be sufficient to require of all schools, but we should insist on that as a condition of admission and that the schools require four annual sessions of eight months each instead of six, and as all of our best schools now require it, let us demand it of all after 1903.

Very truly yours,

WILLIAM T. SLAYTON, M.D.

Deaths and Obituaries.

LANDON CARTER GRAY, M.D., died at his home in New York City, May 8, aged 50 years. He studied in Columbia and Heidelberg universities, and in 1873 took his degree in medicine at Bellevue Hospital Medical College. He began practice in New York City, but afterward moved to Brooklyn, where he was made professor of neurology at the Long Island College Hospital and visiting neurologist to St. Mary's Hospital. He was one of the founders of the New York Polyclinic, and was its professor of nervous and mental diseases. He served as president of the American Neurological Association, the New York Neurological Society, and the Society of Medical Jurisprudence. He was also chairman of the executive committee of the American Congress of Physicians and Surgeons for three successive sessions, and the author of several medical works, among the most important of which is his text-book on nervous and mental diseases.

THOMAS W. GORDON, M.D., Georgetown, Ohio, died April 21, aged 81 years. He was graduated from the Cleveland Medical College in 1846; from 1851 to 1860 he was professor of materia medica and therapeutics in the Cincinnati College of Medicine and Surgery, and during the Civil War was surgeon of the 97th Ohio infantry. He was a member of the AMERICAN MEDICAL ASSOCIATION.

THOMAS DOBBINS, M.D., Marysville, Cal., died May 5, of tuberculosis. He was born in Alabama in 1837, but lived in Missouri most of his early life. In 1855, he was graduated from Brunswick College. He was an army surgeon during the Civil War, and at the close went to California, where he has since lived.

CARL BRUMME, M.D., Detroit, Mich., died May 13, aged 83 years. He was born in Göttingen, Germany, and educated there in the public schools and university. In 1852 he came to America and located in Detroit, where he has since resided. He was a member of the Michigan State Medical Society and of the AMERICAN MEDICAL ASSOCIATION.

ROBERT A. ELLIS, M.D., died in Alaska, June 15, 1899. He was about 100 miles from Cape Nome, and news of his death has just reached here. He was graduated from the Kentucky School of Medicine, in Louisville, in the class of 1882, and for fifteen years had practiced in San Francisco. In 1898 he identified himself with a mining company and was looking after its interests when he was stricken with fever.

W. M. BULLARD, M.D., died recently in Fallbrook, Cal. He was graduated from the Medical College of Indiana in 1876, and then located in Helena, Mont., where he remained until failing health necessitated a change of climate.

DEATHS ABROAD.

DR. RAFAEL LAVISTA, of Mexico, is dead. His name is associated with scientific progress in his country during the last half century; he was the official representative of Mexico at the last three international congresses, and the Pan-American Congress at Washington. The *Revista de Anatomia Pat. y Clin.*, of which he was editor, has suspended publication for the present.

We also note the deaths of Professor Bose, of Giessen, who had recently retired; A. Milne-Edwards and G. Planchow, of Paris.

New Instruments.

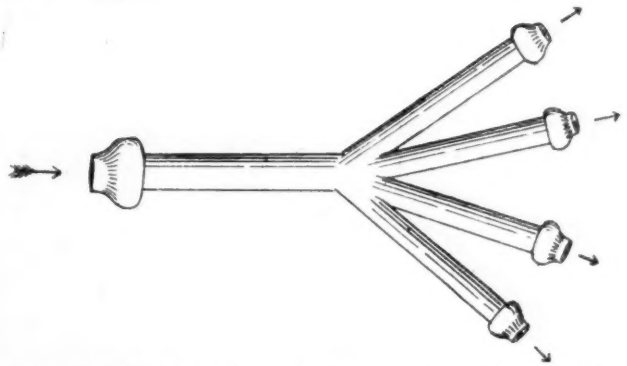
An Improved Device for Rapid Hypodermoclysis.

BY EDWIN M. HASBROUCK, M.D.

WASHINGTON, D.C.

In THE JOURNAL for March 3, page 520, Dr. Evan O'Neill Kane illustrates and describes a simple home-made device for rapid multiple infusion—consisting of a rubber bulb, glass medicine-dropper, rubber tubing and needles. The affair is a most useful one, but for other than absolute emergencies is too unstable in composition, both from the fact that after repeated sterilizations the rubber bulb is bound to deteriorate and eventually become useless—possibly just when most wanted—and that leakage is bound to occur at the points where the tubing is drawn through the bulb, possibly permitting the entrance of air at some stage of the operation.

Acting on the suggestion contained in Dr. Kane's apparatus, I have had made for me a simple little device that, like the eye-dropper, can be carried about in the pocket, or form part of every surgeon's outfit. It can be sterilized at a moment's



notice together with the needles and tubing, and it will last forever. It consists of a single metal tube provided with a bulbous end for holding the receiving tube from the fountain or supply tank. The lower end divides into four tubes, the ends of which are similarly provided for the feed tubes. The accompanying drawing shows the contrivance, exact size. For convenience and speed the four tubes with their needles can be left permanently attached and dried after each usage—the whole apparatus to be kept in a little box in the instrument bag. While the improved apparatus is my own idea, the profession has to thank Dr. Kane for a most useful little contrivance. The instrument here illustrated was made for me by the W. J. McKee Company, of this city.

2422 Fourteenth St., N. W.

The Artificial Defecator and Irrigator.

BY ROBERT N. BARGER, M.D.

HOPEDALE, ILL.

We all recognize the importance of *rest* in the treatment and cure of disease, yet in hemorrhoids and rectal troubles we have never been able to apply this, for the reason that we must defecate daily and have never had a way for avoiding it, or of

doing it artificially. To secure this much needed rest to the diseased parts I have had constructed an instrument which may be called an artificial defecator and irrigator.

I have found that it suits the purpose, i. e., it evacuates the bowels without any expulsory effort, or contraction of the perineal or sphincter ani muscles, thus giving the needed rest. I have used this instrument for six months and find it not only indispensable to patients suffering from hemorrhoids and rectal troubles, but also useful after all serious surgical operations, fractures of the lower limbs, accouchement cases, in all low types of fever, etc.

Not all its therapeutic applications can now be enumerated nor assigned, but they will develop as necessity calls for its use. In the accompanying cuts, Figure 1 represents the instrument closed and ready for introducing into the rectum or

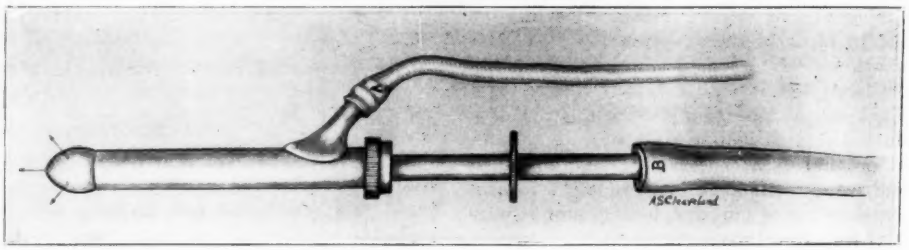


FIGURE 1.

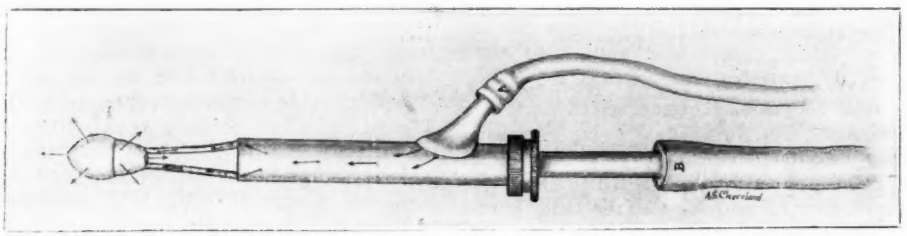


FIGURE 2.

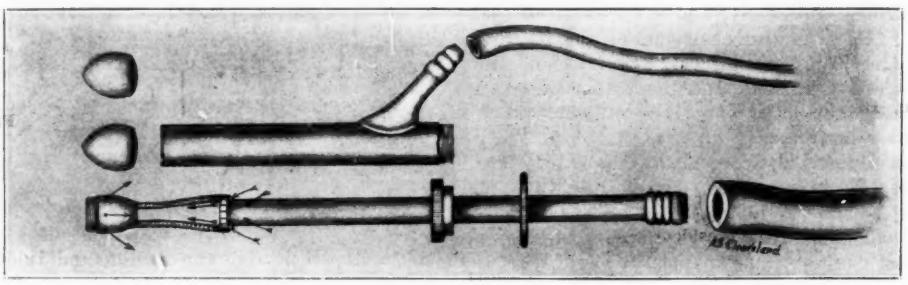


FIGURE 3.

vagina. Figure 2 is the instrument open for use after introduction, the arrows showing the different currents of water. "A" is a rubber tube, or syringe for conveying water into the chamber or reservoir which surrounds the sewerage canal, and "B" is a rubber drainage-tube attached to the sewerage canal for conveying the fecal matters off when the patient is in bed. Figure 3 shows the instrument in three parts for cleansing or sterilizing. The two caps show one for defecation with holes and one for irrigation without holes.

The principal points to be noticed in this instrument are: 1. The sewerage canal is unobstructed by any stem or conduit tube; it has lateral currents to clear the opening and has a straight shoot from the rectum to a vessel beneath the bed. 2. The reservoir or chamber, surrounding the sewerage canal and encased by the outer cylinder, so places the water as to throw currents in every direction, thus triturating and liquefying the fecal matter. This placing of the water also makes it a very desirable rectal and vaginal irrigator.

Queries and Minor Notes.

PRACTICE IN OHIO.

BROOKLYN, N. Y., May 12, 1900.

To the Editor: Will you kindly inform me whether one may now register in Ohio under the present law previous to the one recently enacted taking effect July 1, as noted in THE JOURNAL of above date. Please give me particulars how to go about it, to whom apply, etc. Yours truly, F. S. M.

ANSWER.—There is nothing in the amended Ohio law to prevent registration under the old conditions prior to July 1, 1900. This would give the right to practice, as the amended law reads: "All persons authorized and entitled prior to July 1, 1900, to practice medicine, surgery, or midwifery, in the State of Ohio, under and by virtue of the provisions of an act, entitled, 'An act to regulate the Practice of Medicine in the State of Ohio,' passed Feb. 27, 1896, to which this act is amendatory, may engage in such practice and shall be subject to the law regulating the same; all other persons desiring to engage in such practice in the state shall apply to the state board of registration and examination for a certificate, and submit to the examination heretofore provided.' There are exceptions in favor of Ohio medical students matriculating before Jan. 1, 1900, and a reciprocity clause. For further particulars address the Secretary of the Board of Medical Registration and Examination, Columbus, Ohio.

THE PATIENT AND PHYSICIAN IN ILLUSTRATION.

MILLVILLE, MO., May 7, 1900.

To the Editor: Some time ago THE JOURNAL published an account of a series of three pictures, by a foreign artist, representing the patient's attitude toward his physician, during illness, convalescence and health. If you can give me any information regarding these—as to where and how they can be purchased—I would greatly appreciate it. Very fraternally,

J. M. G.

ANSWER.—The pictures referred to appeared in *Janus*, an international journal devoted to the history of medicine and medical geography, published at Amsterdam, by Dr. H. F. A. Peypers (Address Parkweg 212). Several sets were given. The subscription is $5 a year for twelve numbers of *Janus*. Articles are in German, French or English, as contributed. Surgeon-General Sternberg, Dr. N. S. Davis, of Chicago; Dr. J. E. Pilcher, of Columbus, and Dr. Solis-Cohen, of Philadelphia, are on the list of collaborators.

PATHOLOGY OF CHOREA.

PRINCETON, ILL., April 31, 1900.

To the Editor: Will you kindly tell me whether the pathology of chorea has been satisfactorily determined, and give it to me in as condensed form as possible. T. M. K.

ANSWER.—Its essential lesions are not determined, and none of the several theories that have been advanced can be said to be satisfactorily established. At the present time there seems to be a tendency to attribute the affection to a germ, and it has been claimed that a special bacterium has been found in cases of chorea, but this has not been confirmed. The other theories, the neurotic and the rheumatic, the latter having many supporters, are also still *sub judice*.

ST. LUKE'S HOSPITAL AGAIN.

LOS ANGELES, CAL., May 4, 1900.

To the Editor: A few days ago I received a letter from the president and treasurer of St. Luke's Hospital of Niles, Mich.

The president of this institution, like many another man of reputation, has several titles—M.D., Ph.D., L.L. D.—while the proposition he made me nearly took my breath away, and I began to think that my great merits as a scholar, statesman, writer, orator, microscopist and struggler-for-a-living were about to be appreciated in Michigan, by appointment on the "medical staff" of a great hospital, and to be given a certificate therefor. Here is a copy of the letter:

By way of introduction, we obtained your name from the list of medical practitioners located abroad from "R. L. Polk & Co.'s Medical and Surgical Register," hence this letter to you, subject to your confirmation. The plan of organization is entirely different to that (here is a Scotticism betraying something) of any other institution of its kind—and trust that we may have the pleasure of adding your name to this list, same as we have this day Dr. N. Banerjee, of Calcutta, India, who sent us $10.00 for our genuine sheepskin Certificate and Membership ticket.

We will pay you a commission of 25 per cent. of the operation fee of all surgical cases and 10 per cent. of the fee of all medical cases you may send to our hospital for treatment (from India and Hawaii!) We charge nothing for nursing patients day or night, as that part of the expense is taken from our "Nursing Fund." We do charge, however, for board and room, ranging from $1.50 to $2.00 per day, according to the location selected by the patient.

Should you wish to consult us at any time regarding difficult cases we will freely give you what assistance and advice we can, and will make microscopical analysis of specimens free of charge.

It is our invariable rule never to appoint more than one physician in each locality, and should he so desire it, after accepting the appointment and paying the membership fee, and will send us a list of names, not exceeding twelve, including the local newspapers, we will write individual letters recommending him to them, copy of which we herewith enclose.

To each of our members we issue a very neat and attractive Certificate setting forth that he is a member in good standing on our medical staff, and entitled to all the advantages and privileges of our hospital. We also issue in addition to our certificate a neat pocket lithographed Pocket Membership Ticket, which we believe, if rightly used, will be the means of securing many patients for our hospital. We charge as a membership fee according to the grade of certificate selected (see Physician's Application Blank), which goes to make up our 'Nursing Fund.'

Trusting that you will fill out the enclosed application form and return it to us with a remittance covering the amount of the priced certificates you may select.

We remain yours fraternally, etc.

In a postscript was added:

Our House-Surgeon, Dr. Geo. A. Steel, is also a graduate of Rush, Class of 1895.

At the head of the letter are the names of some thirty-one physicians comprising the medical staff, from Niles, Berlin, New York, Chicago, Cincinnati, Kansas City, Philadelphia, Louisville, Buffalo, Edinburgh, St. Paul, Brooklyn, Paris, Keokuk, Indianapolis, Dublin, St. Louis, London, and Albany. Three of these names were: J. B. Greene, M.D., F.R.C.P.S., president of staff, professor of practice of surgery, Queen's University; L. A. Larsen, A.B., M.D., Rush Medical College of Chicago; A. J. H. Delacey, M.D., University of Edinburgh, Scotland. These names show the cosmopolitan nature of the institution. It annihilates space, and through its wards may flit the attending spirits of Dr. McAdoo of Philadelphia, Dr. Banerjee of Calcutta, Dr. Osborne of Indiana, or Dr. Norwood of London. I call this great!

I received also a membership ticket stating that Dr. ——— is a member of St. Luke's Hospital staff; a blank form for application saying that "the list will be closed shortly," and giving prices of different kinds of certificates; a picture of the president and his hospital, and a printed list of testimonials received from physicians "who are members of our staff." One of them says: "The beautiful certificate of membership has reached me," and another writes: "The certificate is an elegant one, and I shall have it framed and placed in my new sanitarium where all can see it."

The following is a copy of the "individual letter" which would be sent around if the new incumbent so desired:

Dear Sir or Madam: We beg respectfully to call your attention to the fact that we have just recently elected and appointed Dr. ———, of your place, to be a visiting and consulting physician and surgeon on the Medical Staff of our Hospital, on account of his excellent medical qualifications and professional standing. We have no hesitation in recommending him to you, any member of your family, friends or acquaintances, if you should become sick and desire medical treatment. We wish to indorse the Doctor and recommend you to patronize him. Should you at any time desire the services of our hospital for yourself, friends or acquaintances, the Doctor will make arrangements with you so that you can come here for treatment.

We have a first-class, up-to-date hospital, with every home comfort, and a Medical Staff of eminent physicians and surgeons, and our charges are less than anywhere else you may go.

In regard to these letters is the following private information:

The above we send out upon our regular printed business letterheads (twelve to each certificate holder) recommending or indorsing those members only *who have paid for their certificates of membership.*

On receipt of this generous offer and before my gratitude could grow cold, as gratitude often does, I sat down and wrote the following note to the president:

Venerated and Distinguished Sir: I do not think that it would be becoming in a man of my humble station to accept of such vast and appalling honors and responsibilities as you suggest in your letter of February 24, just received. My diplomas and certificates have been secured by hard work; to get so much for so little might at my time of life (menopause) upset me completely.

I have often resented the statement that Americans are fond of titles; that they have a love for empty honors, and like to be "humbugged," but, after reading all these testimonials from physicians who have paid $10 to be placed on the medical staff of the St. Luke's Hospital of Niles, I will be more saving of my indignation. Were the privileges of membership somewhat more difficult to get; were the qualifications more shrewdly stated, and, as is the case with so many other easily-secured honors, made to seem special and legitimate, we should not be surprised that many had swallowed the bait. But here any doctor who can pay the fee gets the certificate. A man who has worked hard to get a real diploma from a real college, does not care to see his name on a sheepskin he can buy for $10; and the older he grows in the experience of the world, the less he seeks the seeming; the more he loves the real.

E. S. GOODHUE, M.D.

Miscellany.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

CHEMISTRY AND PHYSICS. A Manual for Students and Practitioners. New York. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, and William H. Rockwell, Jr., M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, New York. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York. Illustrated with 137 Engravings. Cloth. Pp. 374. Price $1.50. Philadelphia and New York: Lea Brothers & Co.

THE MEDICAL REVIEW. (*Medical and Surgical Review of Reviews*). An Indexed and Illustrated Monthly Summary of all that is Important to the Practitioner in the Medical Periodicals of the World. Edited by Nathen E. Body, M.D. Volume ii, January-December, 1899. Cloth. Pp. 768. London: Harrison & Sons.

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS, INCLUDING GALL-STONES. By A. W. Mayo Robson, F.R.C.S., Senior Surgeon to General Infirmary at Leeds. Assisted by Farquahar MacRae, M.B., C.M. Cloth. Pp. 313. Price $3. Second Edition. New York: William Wood & Co. 1900.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. One Hundred and Fifth Annual Session (Centennial Anniversary). Held at Baltimore, Md., April, 1899; Semi-annual Session held at Frederick, Md., November, 1899. Paper. Pp. 213. Baltimore: Deutsch Co.

A HANDBOOK FOR NURSES. By J. K. Watson, M.D., Late House-Surgeon, Essex and Colchester Hospital. American Edition under the Supervision of A. A. Stevens, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania. Cloth. Pp. 413. Price $1.50. Philadelphia: W. B. Saunders. 1900.

ESSENTIALS OF DIAGNOSIS. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By Solomon Solis-Cohen, M.D., Professor of Clinical Medicine and Therapeutics in the Philadelphia Polyclinic, and Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Illustrated. Second Edition, Revised and Enlarged. Cloth. Pp. 417. Price $1. Philadelphia: W. B. Saunders. 1900.

PATHOLOGY AND SURGICAL TREATMENT OF TUMORS. By N. Senn, M.D., Ph.D., LL.D., Professor of Surgery in Rush Medical College. Second Edition. Revised. Illustrated by 478 Engravings, and 12 Full-Page Plates in Colors. Cloth. Pp. 718. Price $5. Philadelphia: W. B. Saunders. 1900.

TRANSACTIONS OF TWENTY-FIRST ANNUAL MEETING OF AMERICAN LARYNGOLOGICAL ASSOCIATION. Held in Chicago, May 22-24, 1899. Cloth. Pp. 233. New York: D. Appleton & Co. 1900.

CONSTITUTION AND BY-LAWS OF THE SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT. Organized March 17, 1868. Incorporated June 29, 1878. Revision of October 30, 1899. Cloth. Pp. 19. Sacramento, Cal.: W. F. Purnell. 1900.

"FESTSCHRIFT" in Honor of Abraham Jacobi, M.D., LL.D. To Commemorate the Seventieth Anniversary of his Birth. May 6, 1900. Paper. Pp. 496. New York: Knickerbocker Press. 1900.

PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL SESSION OF THE ARKANSAS MEDICAL SOCIETY. Held at Little Rock, Ark., May 10-12, 1899. Paper. Pp. 348. Little Rock: Tunnah & Pittard.

TRANSACTIONS OF THE FLORIDA MEDICAL ASSOCIATION. For the year 1899. Held at Jacksonville, Fla., April 19 and 20. Paper. Pp. 184. Jacksonville: DaCosta Printing Co. 1899.

DEUTSCHE STIMMEN AUS DEUTSCHEN LANDERN. Gesammelt von Frau Prof. Dr. J. H. W. Stuckenberg, North Cambridge, Mass. Paper. Pp. 44. Preis, 5 cents; Das Hundert, 3 dollar. Cambridge: The Co-Operative Press.

PROCEEDINGS OF CONNECTICUT MEDICAL SOCIETY. 1899. One Hundred and Seventh Annual Convention, Held at Hartford, May 24 and 25. Cloth. Pp. 416. Published by the Society.

MEDICAL AND SURGICAL REPORT OF THE PRESBYTERIAN HOSPITAL OF THE CITY OF NEW YORK. Volume iv. January, 1900. Boards. Pp. 223. Edited by Andrew J. McCosh, M.D., and W. G. Thompson, M.D.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. Volume iii. April. 1900. Paper. Pp. 23. Philadelphia. Published by the Society. 1900.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY. March, 1900. Paper. Pp. 39. Philadelphia: Published by the Society.

PAMPHLETS

A MEDICO-RELIGIOUS SOCIETY. By W. T. Parker, Westboro, Mass. Reprinted from Va. Med. Semi-Monthly.

AN EQUATION OF RESPONSIBILITY. By Edwin W. Pyle, Jersey City, N. J. Reprinted from N. Y. Med. Times.

AN EXPERIMENT IN THE TRANSMISSION OF SYPHILIS TO CALVES. By Mazyck P. Ravenel, Philadelphia. Reprinted from Am. Jour. of the Med. Sci.

DEFECTIVE DEVELOPMENT AND DISEASE WITH SPECIAL REFERENCE TO THE CURABILITY OF CONSUMPTION AND CANCER. By M. A. Veeder, Lyons, N. Y. Reprinted from Trans. of Am. Microscopical Society.

DIAGNOSIS AND SOME OF THE CLINICAL ASPECTS OF GYROMA AND ENDOTHELIOMA OF THE OVARY. Fourth Hitherto Undescribed Disease of the Ovary—Colloid Degeneration: Third Hitherto Undescribed Disease of Ovary—Myxomatous Degeneration; Microscopic Studies in Pelvic Peritonitis. By Mary Dixon Jones, New York City. Reprints.

HERNIA OF VERMIFORM APPENDIX. By L. L. Hill, Montgomery, Ala. Reprinted from Med. Record.

PARROTT'S DISEASE: REPORT OF CASE. By C. G. Stivers, Los Angeles, Cal. Reprinted from Southern Cal. Pract.

PRESIDENTIAL ADDRESS: HIGHER MEDICAL EDUCATION. By R. MacNeill, Stanley Bridge, P. E. I. Reprinted from Montreal Med. Jour.

REPORT OF CASE OF FIBROMA OF NECK. By J. A. Sutcliffe, Indianapolis, Ind. Reprinted from Med. and Surg. Monitor.

SURGERY OF THE HAND. By W. A. Kuflewski, Chicago. Reprinted from Chicago Clinic.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 5 to 10, 1900, inclusive:

Francis J. Bailey, acting asst.-surgeon, from Hillsboro, Ore., to the Department of California.

John M. Banister, major and surgeon, U. S. A., member of a board at West Point, N. Y., to examine military cadets.

Reuben M. Bonar, acting asst.-surgeon, U. S. A., now at San Francisco, Cal., is relieved from further duty in the Philippines, and will report for assignment in the Department of California.

George E. Bushnell, major and surgeon, U. S. A., member of a board convened at West Point, N. Y., to examine military cadets.

William J. Enders, acting asst.-surgeon, from Philadelphia, Pa., to the Department of California.

John S. Fogg, acting asst.-surgeon, leave of absence extended.

William M. Hendrickson, acting asst.-surgeon, from Skagway, Alaska, to the Department of California.

Loren B. T. Johnson, acting asst.-surgeon, from Washington, D. C., to the Department of California.

William L. Weller, acting asst-surgeon, from Chicago, to temporary duty at Fort Logan, Colo.

Thomas B. McCown, acting asst.-surgeon, from Windsor, Mo., to the Department of California.

John L. Phillips, captain and asst.-surgeon, U. S. A., member of a board at West Point, N. Y., to examine military cadets.

John J. Repetti, acting asst.-surgeon, from Washington, D. C., to the Department of California.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending May 5, 1900.

(*By cable from Asiatic Station.*)

Asst.-Surgeon W. E. High, detached from the *Manila* and ordered to the hospital.

Asst.-Surgeon D. G. Beebe, detached from the *Yorktown* and ordered to the *Isla de Luzon*.

Surgeon T. A. Berryhill, detached from the *Monongahela*, on reporting of relief, and ordered home to wait orders.

P. A. Surgeon W. M. Wheeler, detached from the *Vermont*, May 3, and ordered to the *Kearsarge*.

P. A. Surgeon G. H. Barber, detached from the *Kearsarge* and ordered to the *Monongahela*.

Asst.-Surgeon D. H. Morgan, ordered to the *Vermont*.

Medical Inspector J. C. Boyd, detached from duty as assistant to bureau of medicine and surgery, Navy Department, and ordered to the *New York*, as fleet surgeon of the North Atlantic Station.

Medical Inspector P. Fitzsimons, detached from the *New York*, as fleet surgeon of the North Atlantic Station, and ordered to proceed home and wait orders.

Surgeon J. D. Gatewood, detached from the bureau of medicine and surgery, Navy Department, May 8, and ordered to duty as assistant to bureau of medicine and surgery, same day.

P. A. Surgeon C. D. Brownell, ordered to the naval training station, Newport, R. I.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended May 3, 1900.

Surgeon P. H. Bailhache, detailed to represent the Service at the convention for the decennial revision of the United States Pharmacopeia, at Washington, D. C., May 2.

Surgeon Eugene Wasdin, detailed to represent the Service at the meeting of the AMERICAN MEDICAL ASSOCIATION, at Atlantic City, N. J., June 5 to 8.

P. A. Surgeon J. O. Cobb, to report to chairman of board of examiners for examination to determine fitness for promotion to the grade of surgeon.

P. A. Surgeon H. D. Geddings, detailed to represent the Service at the convention for the decennial revision of the United States Pharmacopeia, at Washington, D. C., May 2.

P. A. Surgeon M. J. Rosenau, detailed to represent the Service at the meeting of the AMERICAN MEDICAL ASSOCIATION, at Atlantic City, N. J., June 5 to 8.

Asst.-Surgeon S. R. Tabb, upon being relieved from duty at Savannah, Ga., to report in person at the bureau for further orders.

Asst.-Surgeon John McMullen, granted 60 days extension of leave of absence.

Asst.-Surgeon R. H. von Ezdorf, relieved from duty at New Orleans, La., and directed to proceed to Savannah, Ga., and assume command of the Service.

Asst.-Surgeon L. D. Fricks, relieved from duty at Washington, D. C., and directed to proceed to Manila, P. I., and report to the chief quarantine officer for duty.

Asst.-Surgeon G. M. Corput, to proceed to Mullet Key, Fla., and assume command of the detention camp and the steamer *W. D. Bhatton*.

Asst.-Surgeon H. A. Stansfield, relieved from duty at Honolulu, H. I., and directed to proceed to Manila, P. I., and report to the chief quarantine officer for duty.

Hospital Steward E. S. Maguire, relieved from duty at Evansville, Ind., and directed to proceed to New York City (Stapleton), and report to the medical officer in command, for duty and assignment to quarters.

Hospital Steward H. R. Mason, to proceed to New York City and report to the medical purveyor for temporary duty.

Hospital Steward E. M. Holt, to proceed to Portland, Me., and report to the medical officer in command for temporary duty and assignment to quarters.

BOARD CONVENED.

Board convened to meet at Washington, D. C., May 3, 1900, for the examination of P. A. Surgeon J. O. Cobb, to determine his fitness for promotion to the grade of surgeon. Detail for the Board—Surgeon J. H. White, Chairman; Surgeon R. M. Woodward, and Surgeon G. T. Vaughan, Recorder.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 12, 1900.

SMALLPOX—UNITED STATES AND INSULAR.

Alabama: Mobile, April 26 to May 5, 4 cases.
District of Columbia: Washington, April 26 to May 5, 1 case, 1 death.
Florida: Jacksonville, April 26 to May 5, 1 case.
Indiana: Evansville, April 26 to May 5, 5 cases; Indianapolis, April 26 to May 5, 6 cases.
Iowa: Des Moines, April 1 to 30, 16 cases; Ottumwa, April 14 to 21, 2 cases.
Kansas: Wichita, April 26 to May 5, 4 cases.
Kentucky: Covington, April 26 to May 5, 6 cases; Lexington, April 26 to May 5, 1 case.
Louisiana: New Orleans, April 26 to May 5, 50 cases, 18 deaths.
Maryland: Baltimore, April 26 to May 5, 5 cases.
Massachusetts: Chicopee, April 26 to May 5, 1 case.
Michigan: Grand Rapids, April 26 to May 5, 3 cases.
Nebraska: Omaha, April 21 to 28, 2 cases.
New York: New York, April 26 to May 5, 2 cases.
Ohio: Cleveland, April 26 to May 5, 7 cases, 1 death.
Tennessee: Nashville, April 26 to May 5, 2 cases.
Utah: Ogden, April 1 to 30, 2 cases; Salt Lake City, April 26 to May 5, 5 cases.
Philippines: Manila, March 3 to 24, 9 cases, 1 death.

SMALLPOX—FOREIGN.

Austria: Prague, April 7 to 21, 9 cases.
Belgium: Ghent, April 14 to 21, 1 death.
Brazil: Rio de Janeiro, March 23 to 30, 6 cases, 12 deaths.
Canada: New Brunswick—Grand Falls and St. Leonards, April 28, present; Ontario, April 18 to May 1, 3 cases; Quebec—Bonaventure County, May 4, 26 cases.
England: Liverpool, April 14 to 21, 18 cases, 3 deaths; London, April 14 to 21, 4 cases; Southampton, April 14 to 21, 2 cases.
France: Lyons, April 1 to 14, 3 deaths.
Gibraltar: Gibraltar, April 15 to 22, 2 cases, 1 death.
Greece: Athens, April 14 to 21, 2 cases, 1 death.
India: Bombay, April 3 to 10, 111 deaths; Calcutta, March 10 to 17, 28 deaths: Kurrachee, April 1 to 8, 20 cases, 14 deaths.
Italy: Milan, April 21 to 28, 1 case.
Mexico: Vera Cruz, April 21 to 28, 4 deaths.
Russia: Moscow, April 1 to 7, 7 cases; Odessa, April 7 to 21, 24 cases, 8 deaths; Warsaw, April 1 to 4, 5 deaths.
Scotland: Glasgow, April 14 to 21, 6 cases, 1 death.
Spain: Corunna, April 14 to 21, 1 death
Straits Settlements: Singapore, March 10 to 17, 3 deaths.
Venezuela: Maracaibo, April 7 to 14, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 23 to 30, 7 cases, 23 deaths: Santos, February 18 to April 8, 125 deaths.
Mexico: Vera Cruz, April 21 to 28, 1 death.

CHOLERA.

India: Bombay, April 3 to 10, 15 deaths: Calcutta, March 10 to 17, 77 deaths.
Philippines: Manila, March 3 to 24, 15 cases, 12 deaths.

PLAGUE—INSULAR.

PLAGUE—FOREIGN.

Arabia: Aden, February 21 to April 14, 119 cases, 81 deaths.
Egypt: Port Said, May 4, outbreak reported.
India: Bombay, April 3 to 10, 698 deaths; Calcutta, March 10 to 17, 744 deaths; Kurrachee, April 1 to 8, 471 cases, 333 deaths.

CHANGE OF ADDRESS.

Dr. D. M. Alluseth, from 429 Grand Avenue to 1467 Humboldt Boul., Chicago, Ill.

Dr. E. F. Brandon, from Detroit, Mich., to Ainger, Ohio.

Dr. J. C. Beach, from 3007 Cottage Grove Avenue, Chicago, Ill., to care Orr, Brown & Price, Columbus, Ohio.

Dr. W. C. Bailey, from Hot Springs to Las Vegas, N. M.

Dr. A. J. Brower, from Detroit to Martin, Mich.

Dr. C. M. Brucker, from Denver, Colo., to 805 9th Street, Tell City, Ind.

Dr. E. N. Brady, from 338 Marshfield Avenue to 323 S. Western Avenue, Chicago, Ill.
Dr. H. J. O'Brien, from 620 Tower Street to Waterman Block, West Superior, Wis.
Dr. H. A. Brous, from 9th and Pine Streets, Philadelphia, Pa., to Manhattan, Kans.
Dr. G. A. Bachman, from Detroit to Burnips Corners, Mich.
Dr. M. R. Beaudoin-Bennett, from Jackson, Mich., to 176 Broadway, New York, N. Y.
Dr. P. H. Banta, from Detroit to Hubbardston, Mich.
Dr. I. B. Chadwick, from 1514 Myrtle Street to 4627 E. 10th St., Kansas City, Mo.
Dr. J. F. Cardwell, from St. Luke's Hospital, Detroit to Durand Mich.
Dr. W. H. Curtiss, from 528 S. 9th Street, Lafayette to Frankfort, Ind.
Chicago Med. Society, from Stewart Bldg. to 203 Michigan Avenue, Chicago, Ill.
Dr. S. F. Clay, from Washington, D. C., to Lewisburg, W. Va.
Dr. D. A. Conrad, from Los Angeles to 40 E. Colorado Street, Pasadena, Cal.
Dr. S. C. Carver, from Winterset to Lorimor, Iowa.
Dr. F. C. Chandler, from 1236 to 1318 Noble Avenue, Chicago,
Dr. J. W. Duncan, from Atlanta, Ga., to Gay and Vine Streets, Knoxville, Tenn.
Dr. E. C. Dukes, from St. Louis to Lookout, Mo.
Dr. L. B. Dochterman, from 95 Columbia Street East, Detroit, Mich., to Covington, Ind.
Dr. E. E. Evans, from Detroit to Armada, Mich.
Dr. A. R. Edwards, from 2818 to 2930 Indiana Avenue, Chicago,
Dr. G. S. Edmonson, from Marva to Renmek Opera House, Clinton, Ill.
Dr. J. P. Freeman, from Glenville to Emmons, Minn.
Dr. C. H. Frizelle, from Chicago to Sterry Block, Pontiac, Ill.
Dr. F. E. Gibbons, from 492 Lincoln Street, Chicago, Ill., to Mattoon, Wis.
Dr. R. L. Gallaher, from Wheat, Tenn., to English, Texas.
Dr. C. O. Gose, from Pleasantville, Iowa, to Hennessey, O. T.
Dr. S. E. Greenfield, from 682 W. Adams Street, Chicago, Ill., to Atchison, Kans.
Dr. H. D. Gray, from Newton to Kellogg, Iowa.
Dr. I. J. K. Golden, from 1045 to 1134 Milwaukee Avenue, Chicago, Ill.
Dr. P. H. Hansberry, from Milwaukee to Hillsboro, Wis.
Dr. E. D. Hammond, from Omaha, Neb., to Tie Siding, Wyo.
Dr. Chas. Hines, from 629 Front Street, to 265 Morrison Street, Portland, Ore.
Dr. O. E. Howell, from Woods to Santa Rosa, Mo.
Dr. C. P. Horner, from Paxton to Tampico, Ill.
Dr. S. Hexter R. A. C. Co., from 199 Market St. to 154 State St., Chicago, Ill.
Dr. F. D. Hollenbeck, from 313 E. Chicago Ave. to 205 North State St., Chicago, Ill.
Dr. H. J. Hillebrand, from 863 Armitage Ave. to 1059 W. Fullerton Ave., Chicago, Ill.
Dr. C. W. Heath, from 165 Wood St. to 16 Astor St., Chicago.
Dr. J. Hawley, from 3515 Grand Boul. to 3421 S. Park Ave., Chicago, Ill.
Dr. J. D. Hartley, from 6422 Stony Island Avenue to 7840 Emerald Avenue, Chicago, Ill.
Dr. R. B. Jackson, from Washington, D. C., to 156 W. 53d Street, New York, N. Y.
Dr. H. Johnston, from New Orleans to Clinton, La.
Dr. W. A. Jaquith, from 2522 Calumet to 3841 Rhodes Avenue, Chicago, Ill.
Dr. W. A. Joyce, from Baltimore, Md., to 187 54th Street, Brooklyn, N. Y.
Dr. M. F. Kirkbride, from Philadelphia, Pa., to Spring Lake Beach, N. J.
Dr. E. K. Kerr, from 2328 Calumet Avenue to 1323 Washington Boul., Chicago, Ill.
Dr. J. Klein, from St. Elizabeth Hospital to 4800 N. Clark Street, Chicago, Ill.
Dr. J. E. Lanier, from Quince to Omega, Ga.
Dr. Jas. B. Lewis, from Waseca to St. James, Minn.
Dr. A. L. Lehman, from Mullan to Wallace, Idaho.
Dr. E. A. Lawbaugh, from 31 Washington Street, to 237 La Salle Avenue, Chicago, Ill.
Dr. P. V. Mikell, from 178 Ashley Avenue, Charleston, to Lady and Sumter Streets, Columbia, S. C.
Dr. R. E. Miller, from 5858 State Street to 5859 Wentworth Avenue, Chicago, Ill.
Dr. J. F. McKinley, from 3457 State Street to 39th and Cottage Grove Avenue, Chicago, Ill.
Dr. Jno. S. Miller, Philadelphia, Pa., to Louisville, Colo.
Dr. W. O. Nance, from 5213 Hibbard Avenue to 100 State Street, Chicago, Ill.
Dr. J. C. Oliver, from Malvern Place to 2221 Park Avenue, Cincinnati, Ohio.
Dr. F. P. Parker, from Centaur to 1423 Euclid Avenue, St. Louis, Mo.
Dr. H. J. Patten, from 1735 Armitage Avenue to 1093 Tripp Avenue, Chicago, Ill.
Dr. H. C. Palmer, from 5 Hopper Street to 2 West Street, Utica, N. Y.
Dr. W. E. Patterson, from 706 Monroe Street, Chicago, Ill., to Greene, Iowa.
Dr. L. W. Rowell, from 280 S. Leavitt Street to 45 Loomis Street, Chicago, Ill.
Dr. E. E. Rohrabaugh, from 4308 Langley Avenue to 109 42d Place, Chicago, Ill.
Dr. H. H. Rittenhouse, from 57th and Jefferson Streets to 5739 Rosalie Court, Chicago, Ill.
Dr. I. C. Rosse, from 1701 H Street N. W., to 1110 F Street N.W., Washington, D. C.
Dr. B. W. Sippy, from 143 Oakwood Boul. to The Winamac, Chicago, Ill.
Dr. I. J. Sexton, from 384 S. Marshfield to 835 W. Harrison Street, Chicago, Ill.
Dr. C. M. Shanely, from Ledgerwood to Forman, N. D.
Dr. H. B. Stehman, from Pasadena to 217 S. Broadway, Los Angeles, Cal.
Dr. J. A. Silverman, from 975 Post Street to 822 Geary Street, San Francisco, Cal.
Dr. W. B. Simpson, from New Orleans, La., to Hot Springs, Ark.
Dr. A. D. Smith, from 295 Marshfield Avenue, Chicago, Ill., to Hicks Bldg., San Antonio, Texas.
Dr. T. E. Spaulding, from Galveston to Kingston, Texas.
Dr. L. A. Sholars, from New Orleans to Henry, via Abbeville, Louisiana.
Dr. J. T. Topinka, from 2534 Wentworth to 2602 Indiana Avenue, Chicago, Ill.
Dr. C. Vedeler, from Denver to care D. & R. G. Hospital, Salida Colorado.
Dr. A. S. Waiss, from 2691 to 2516 N. Hermitage Avenue, Chicago, Ill.
Dr. F. E. Wadhams, from 3329 Indiana to 3435 S. Park Avenue, Chicago, Ill.
Dr. U. R. Webb, from Lenox Flats, 16th and L Streets, to 2021 Hilliger Place, Washington, D. C.
Dr. T. B. Wingo, from Martin, Tenn., to Dexter, Mo.
Dr. C. L. Worrall, from Alliance to Magnolia, Ohio.
Dr. M. N. White, from Augusta, Ga., to 1521 Fitzwater Street, Philadelphia, Pa.
Dr. O. A. Young, from 626 6th Avenue, Cedar Rapids, Iowa, to 1009 Rusk Avenue, Houston, Texas.
Dr. A. T. Zeller, from 901 Walnut Street to 603 Locust Street, McKeesport, Pa.

Association News.

Board of Trustees.—There will be a meeting of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION in Room 237, Hotel Dennis, Atlantic City, N. J., at 10 a. m., Monday, June 4, 1900. Alonzo Garcelon, M.D., President.

Membership Receipts.—Members attending the Atlantic City meeting, and who have paid their dues for 1900, are reminded of the necessity of taking their receipts with them if they wish to avoid annoyance when they register.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Delegates to the Meeting of the American Medical Association.—Secretaries of societies are requested to forward the names of delegates as soon as possible after these are appointed or elected. George H. Simmons, M.D., Secretary, 61 Market St., Chicago.

General Business Committee.—The first meeting of the General Business Committee of the AMERICAN MEDICAL ASSOCIATION will be held at the Hotel Dennis, Atlantic City, N.J., on Monday afternoon, June 4, at 4:30 o'clock. Subsequent meetings of the Committee will be held at the same place and hour, every afternoon, during the meeting of the ASSOCIATION, unless otherwise directed by the Committee. In order that the business of the ASSOCIATION may be effectively transacted, it is very important that all the members of the Committee should attend all its meetings. L. DUNCAN BULKLEY, Acting Secretary.

Railroad Rates for Atlantic City Meeting.—As previously anounced in these columns, the Trunk Lines Association and the Central Passenger Association have granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of these Associations from May 30 to June 7, and good to return to June 23. Action has also been taken by the Western Passenger Association, and the same rate announced from all points in its territory, tickets also to be sold on the certificate plan, the dates of sale being May 30 to June 5. The return limit was made June 12 by this Association, but on account of the later limit allowed by the others, it will probably be changed to correspond with that of the Trunk Lines and Central Passenger associations. The certificates will be signed at Atlantic City by Dr. W. Blair Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent will be present on June 6, 7 and 8. The territory covered by the two first-named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc. The Western Passenger Association's territory to which the certificate plan usually applies comprises points west of Chicago, Peoria and St. Louis, including Oklahoma, Indian Territory, Kansas, Colorado, Utah, Nebraska, South Dakota, Minnesota, Wis-

consin, Iowa, most of North Dakota and Missouri, and northern Michigan and northern Illinois.

Pathologic Exhibit at the American Medical Association.—The state medical society has constituted the chief avenue through which pathologic material has been solicited for the exhibit, and a number of state organizations have appointed representatives or committees to take in charge the work. Besides, a number of laboratories and hospitals will send on their own account. A partially complete list of the organizations and institutions which will participate, with the committees acting for them, is as follows: Alabama Medical Association, Thos. D. Parke, Birmingham; Colorado State Medical Society, A. M. Holmes, Denver; Florida State Medical Society, Edward N. Liell, Jacksonville; Illinois State Medical Society, Maximilian Herzog, Chicago; Indiana State Medical Society, Frank B. Wynn and H. G. Gaylord, of Indianapolis, L. P. Drayer of Fort Wayne, A. W. Bitting of Lafayette, Edwin Walker of Evansville, George H. Grant of Richmond, Allen Pierson of Spencer and L. J. Willien of Terre Haute; Kentucky State Medical Society, James B. Bullit, Louisville; Louisiana State Medical Society, O. L. Pothier, New Orleans; Missouri State Medical Association, Hugo Summa, St. Louis; New Jersey State Medical Society, F. W. Bailey, Elizabeth; New York State Medical Association, Edward K. Dunham, D. Hunter McAlpin, Leon T. LeWald, and J. W. Draper Maury, New York City; North Carolina State Medical Society, Richard H. Whitehead, Chapel Hill; Ohio State Medical Society, A. P. Ohlmacher, Gallipolis; Tennessee State Medical Society, William Krauss, Memphis; West Virginia State Medical Society, W. P. Goff, Clarksburg; Wisconsin State Medical Society, Gustav A. Kletzsch, Milwaukee; Government Hospital for Insane, A. R. Richardson and I. W. Blackburn, Washington; Iowa State University, Walter L. Bierring, Iowa City; Johns Hopkins Hospital, William H. Welch, Baltimore; Lakeside Hospital, William T. Howard, Jr., and Dr. Perkins, Cleveland; Pepper Laboratory and other institutions of Philadelphia, Alfred Stengel; Pathological Institute of the New York State Commission in Lunacy, Ira Van Gieson, New York City; United States Marine-Hospital Service, Walter Wyman, Washington; United States Bureau of Animal Industry, D. E. Salmon, Washington.

It is urged that representatives in charge of collections, as well as individuals sending specimens, should comply as nearly as possible with the wishes of the committee in the matter of case histories. These should be typewritten, crosswise on paper 5½ by nine inches in size, leaving a margin of 1½ inches at the top. The first page should be a brief containing the essential facts and striking features of the specimen, to be elaborated in the succeeding pages. For specimens with meager data a large tag will be provided. In the former the case history will be enclosed in a neat cover and placed with the specimen for convenience of reference. Tags and covers may be obtained from the secretary of the committee by specifying the number desired.

Specimens should be packed carefully and labeled "Breakable!" There will be less danger of breakage if the packages do not exceed 250 to 300 pounds in weight. Boxes with rope handles may be checked on the tickets of the representative accompanying the collection. If shipped by freight due allowance should be made for delays. Every possible effort should be made to have the material reach Atlantic City by June 2, and under no circumstances later than June 4, since it will require considerable time and labor to put the collection in order. In every instance the committee should be notified as to the method of transportation, date of shipment and probable time of arrival. All material or communications expected to arrive in Atlantic City after May 31 should be sent in care of the "Pathological Exhibit of The American Medical Association."

The members of the Provisional Committee on the Pathologic Exhibits are: Joseph Stokes, Moorestown, N. J., Chairman; Alfred Stengel, 1811 Spruce St., Philadelphia; W. W. Fox, City Hospital, Atlantic City, N. J.; Frank B. Wynn, 18 E. Ohio St., Indianapolis, Ind., Secretary.

Programs for Atlantic City Meeting.

Following are the lists of papers to be presented before the several Sections at the next meeting of the ASSOCIATION.

SECTION ON PRACTICE OF MEDICINE.

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman. GEORGE DOCK, Ann Arbor, Mich.
2. A System of Personal Biologic Examinations of the Condition of Adequate Medical and Scientific Conduct of Life. GEORGE M. GOULD, Philadelphia.
3. The Hospital Clinical Laboratory. C. N. B. CAMAC, New York City.
4. Value of Bacteriologic Cultures of Throat to General Practitioner. M. HOWARD FUSSELL, Philadelphia.
5. Dysentery. SIMON FLEXNER, Philadelphia.
6. Notes on Tropical Dysentery. J. H. MUSSER, Philadelphia.
7. Serumtherapy in Croupous Pneumonia. J. C. WILSON, Philadelphia.
8. Influence of Sea Air and Sea Water Baths on Disease. W. BLAIR STEWART, Atlantic City, N. J.

WEDNESDAY, JUNE 6—MORNING SESSION.

9. Pseudo (?), or Modified (?) Smallpox? T. J. HAPPEL, Trenton, Tenn.
10. Yellow Fever: Its Nature and Its Cause. EUGENE WASDIN, Surgeon, U. S. M.-H. S.
11. Prolonged Fevers of Obscure Origin. ROBT. B. PREBLE, Chicago.
12. Some Interesting Cases of Infectious Diseases. DELANCEY ROCHESTER, Buffalo, N. Y.
13. Certain Clinical Features of Influenza Recently Epidemic. H. S. ANDERS, Philadelphia.
14. Influenza With Four Distinct Pneumonic Attacks Accompanied by Otitis Media Purulenta, Cerebral Hyperemia, Colitis, Marasmus. Recovery. JULIUS ULLMAN, Buffalo, N. Y.
15. Observations on Direct Antiseptic Treatment of Infectious Diseases. C. AM ENDE, New York City.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

SYMPOSIUM ON MALARIA.

16. Pathology of Malarial Fevers; Structure of the Parasites and Changes in the Tissues. JESSE W. LAZEAR, U. S. A., Havana, Cuba.
17. Etiology of Malaria With Especial Reference to Mosquitoes. W. S. THAYER, Baltimore, Md.
18. Inoculation of Malarial Fever Through Agency of the Mosquito, with Some Sections and Dissections of the Mosquito. Etiology of Malarial Fever and Some Observations Made in the South Several Years Ago. A. E. WOLDERT, Philadelphia.
19. Entomologic and Practical Aspects of the Mosquito; With Specimens and Drawings. L. O. HOWARD, U. S. Dept. of Agriculture.
20. Some Typical Cases of Estivo-autumnal Fever and Combined Estivo-autumnal and Tertian Malarial Fevers; with a Study of the Parasites Observed in the Blood. CHAS. F. CRAIG, U. S. Army.
21. Experiences with Some of the Pernicious Forms of Malaria. M. GOLTMAN, Memphis, Tenn.
22. Clinical Observations in Malaria. FRANK A. JONES, Memphis, Tenn.
23. Malarial Hemoglobinuria. WM. BRITT BURNS, Deckerville, Ark.

Discussion on Malaria, by WM. OSLER,, Baltimore; A. C. ABBOTT, Philadelphia; WM. KRAUSS, Memphis, Tenn.; ARTHUR R. EDWARDS, Chicago; JUDSON DALAND, Philadelphia; T. J. HAPPEL, Trenton, Tenn.

THURSDAY, JUNE 7—MORNING SESSION.

SYMPOSIUM ON ARTHRITIS.

24. Pathology of Rheumatism. DAVID RIESMAN, Philadelphia.
25. Rheumatism and Prevention of Heart Complications. JAMES J. WALSH, New York City.

26. Relations of Chorea and Rheumatism.
C. W. BURR, Philadelphia.
27. Heart in Rheumatism.
DELANCEY ROCHESTER, Buffalo, N. Y.
28. Heart in Rheumatism. ARTHUR R. EDWARDS, Chicago.
29. Pathogenesis and Clinical Features of Arthritis Deformans. A. O. J. KELLY, Philadelphia.
30. Iodid of Iron in Treatment of Certain Forms of Infective Arthritis. J. C. WILSON, Philadelphia.

Discussion on Arthritic Diseases, by F. A. PACKARD, Philadelphia; J. H. MUSSER, Philadelphia; J. M. ANDERS, Philadelphia; EDWARD F. WELLS, Chicago; CHARLES G. STOCKTON, Buffalo, N. Y.; L. F. BISHOP, New York City; H. B. FAVILL, Chicago.

31. Case of Malignant Endocarditis with Recovery.
N. S. DAVIS, JR., Chicago.
32. Relative Importance of Muscular and Valvular Lesions of Diseases of the Heart.
S. SOLIS-COHEN, Philadelphia.
33. Clinical Study of Myocarditis.
LOUIS FAUGERES BISHOP, New York City.
34. Plea for a More Rational Prognosis in Heart Affections.
JNO. J. MORRISSEY, New York City.

Discussion on Cardiac Disease, by FRANK BILLINGS, Chicago; DELANCEY ROCHESTER, Buffalo, N. Y.; JAMES B. HERRICK, Chicago; O. T. OSBORNE, New Haven, Conn.; D. D. STEWART, Philadelphia; BERTRAM W. SIPPY, Chicago; ROBERT B. PREBLE, Chicago; M. H. FUSSELL, Philadelphia.

THURSDAY, JUNE 7—AFTERNOON SESSION.

35. In What Relation Does Occupation Stand to Tuberculosis? W. FRUEDENTHAL, New York City.
36. Diagnosis and Treatment of Prebacillary Stage of Pulmonary Tuberculosis. J. M. ANDERS, Philadelphia.
37. Subnormal Temperature in Pulmonary Phthisis; Its Clinical Significance.
J. FRANK MCCONNELL, Las Cruces, New Mexico.
38. Importance of Rest in Pulmonary Tuberculosis.
CARROLL E. EDSON, Denver, Colo.
39. Pulmonary Tuberculosis; Present Condition of Cases Treated During 1898 and Reported Last Year at the Columbus Meeting. C. P. AMBLER, Asheville, N. C.
40. Tuberculosis of the Lungs. A. F. LEMKE, Chicago.
41. Rational Treatment of Tuberculosis With Compressed-Air in Saturated Antiseptic Solution for Inhalation and Internal Use.
EUSTATHIUS CHANCELLOR, St. Louis, Mo.
42. Silver Injection Treatment of Pulmonary Consumption.
THOMAS J. MAYS, Philadelphia.

Discussion on Tuberculosis, opened by J. C. WILSON, Philadelphia; DELANCEY ROCHESTER, Buffalo; HENRY B. FAVILL, Chicago; S. SOLIS-COHEN, Philadelphia; JAMES B. HERRICK, Chicago.

43. Hydrophobia and the Pasteur Method.
CHARLES WINSLOW DULLES, Philadelphia.
44. Brain Break and Nerve Strain of the American Soldier; His Mind and Nerve Exhaustion; His Insanity and Neurasthenia. C. H. HUGHES, St. Louis, Mo.

FRIDAY, JUNE 8—MORNING SESSION.

45. Diagnosis of Diabetes. JAMES B. HERRICK, Chicago.
46. Mortality From Diabetes Mellitus In the City of New York During the Decade 1889-1899.
HEINRICH STERN, New York City.
47. Cutaneous Diseases Accompanying Diabetes.
MILTON B. HARTZELL, Philadelphia.
48. Exophthalmic Goiter.
O. T. OSBORNE, New Haven, Conn.
49. Typhoid Bacillus and Its Complete Biologic History From Eberth's Discovery Until To-day.
FELIX VITALE, Coytesville, N. J.
50. Case of Scorbutus in Which Typhoid Fever, Complicated by Acute Leukemia, Occurred.
D. D. STEWART, Philadelphia.
51. Chlorosis: With Especial Reference to Diagnosis, Prognosis and Treatment. EDWARD F. WELLS, Chicago.
52. Treatment of Typhoid Fever with Bactericidal Agents and Some Consequent Deductions.
JAMES M. PECK, Arlington, Ky.

FRIDAY, JUNE 8—AFTERNOON SESSION.

53. Lesions of Cauda Equina and Conus Medullaris.
BERTRAM W. SIPPY, Chicago.
54. Movable Kidney From the Standpoint of the General Practitioner. A. MARCY, JR., Riverton, N. J.
55. Antiseptic Treatment of Diphtheria.
D. BENJAMIN, Camden, N. J.
56. Rational Therapeusis of So-Called Uric Acid Lesions With Some Original Investigations.
ALFRED C. CROFTAN, Pasadena, Cal.
57. Some Points on the Nature and Treatment of the Melancholias. J. JOSEPH KINDRED, New York City.
58. Climatology of Arizona.
WILLIAM DUFFIELD, Phœnix, Ariz.
59. Clinical Laws of Immunity of Disease.
LAMBERT OTT, Philadelphia.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY, JUNE 5—AFTERNOON SESSION.

2 o'clock.

1. Address of Chairman. W. E. B. DAVIS, Birmingham, Ala.
2. Value of the Angiotribe in Vaginal Celiotomy.
J. H. CARSTENS, Detroit, Mich.
3. Further Experience with Tuffier's Angiotribe.
I. S. STONE, Washington, D. C.
4. Angiotripsy in Abdominal Surgery.
HUGH M. TAYLOR, Richmond, Va.

3:30 o'clock.

SYMPOSIUM ON FIBROMYOMA.

5. Personal Experience with Uterine Fibroid.
H. D. INGRAHAM, Buffalo, N.Y.
6. Myomectomy Per Vaginam.
J. RIDDLE GOFFE, New York City.
7. Myofibroma Uteri. H. J. BOLDT, New York City.
8. Arrhythmia Cordis Complicating Fibromata Uteri.
J. WESLEY BOVÉE, Washington, D. C.
9. Anteflexion of Uterus; Its Causes and Treatment.
AUGUSTUS P. CLARKE, Cambridge, Mass.

WEDNESDAY, JUNE 6—MORNING SESSION.

9 o'clock.

10. Improved Technique in Major and Minor Surgery of the Female Generative Organs.
HENRY P. NEWMAN, Chicago.
11. The Rubber Glove in Aseptic Surgery.
C. C. FREDERICK, Buffalo, N. Y

10 o'clock.

SYMPOSIUM ON OBSTETRICS.

12. Practical Application of Posture During Labor.
EDWARD P. DAVIS, Philadelphia.
13. Plea for Regular and Systematic Examination of the Uterus for Eight or Ten Weeks Following Parturition.
HIRAM N. VINEBERG, New York City.
14. Parturition as a Factor in Gynecic Practice.
JOHN M. DUFF, Pittsburg, Pa.
15. Classical Cesarean Section Versus the Porro-Cesarean.
GEO. M. BOYD, Philadelphia.
16. Forced Re-expansion of Uterus During Labor and Its Relation to Manual Operations for Correction of Malpositions of Child.
D. BENJAMIN, Camden, N. J.
17. Maternity Hospitals and Obstetric Teaching.
GEO. C. MOSHER, Kansas City, Mo.
18. Puerperal Eclampsia.
J. LUE SUTHERLAND, Grand Island, Neb.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

3 o'clock.

SYMPOSIUM ON THE RELATION OF PELVIC AND INTRA-ABDOMINAL DISEASES TO NERVOUS DISEASES.

19. Causal Relation Intra-Abdominal Diseases Bear to Nervous Disturbances Recognized by Gynecologists, Ignored by Neurologists. HENRY O. MARCY, Boston.

20. Traumatisms and Malformation of Female Generative Apparatus as Cause of Insanity.
GEO. H. NOBLE, Atlanta, Ga.
21. Neuroses Due to Autointoxication from Faulty Menstruation. ARTHUR JOHNSTONE, Cincinnati, Ohio.
22. Tubo-Ovarian Adhesions; Their Reflexes.
A. L. BEAHAN, Canandaigua, N. Y.
23. Gall-Stones and Diseases of Gall-Bladder and Nervous Symptoms Resulting Therefrom.
EDWIN RICKETTS, Cincinnati, Ohio.
24. How Shall We Treat Our Cases of Hysteria and Neurasthenia. JOSEPH TABER JOHNSTON, Washington D. C.
25. Title to be announced. F. X. DERCUM, Philadelphia.
26. Third Element in Equation Between Pelvic Disease and Disturbance in Nervous System in Women.
H. A. TOMLINSON, St. Peter, Minn.
27. Pelvic Disease as a Factor of Cause in Insanity of Female, and Surgery as a Factor of Cure.
E. C. CARPENTER, Columbus, Ohio.
28. Interrelation of Gynecology and Neurology in Practice.
C. H. HUGHES, St. Louis, Mo.

THURSDAY, JUNE 8—MORNING SESSION.

29. Abdominal Tumors of Infancy. DENSLOW LEWIS, Chicago.
30. Aseptic Minor Gynecology with Demonstrations.
AUGUSTIN H. GOELET, New York City.

SYMPOSIUM ON CANCER OF FEMALE GENERATIVE ORGANS.

10 o'clock.

31. The Prophylaxis and Diagnosis of Cancer of Uterus.
L. S. MCMURTRY, Louisville, Ky.
32. Technique of Vaginal Extirpation for Cancer of Uterus.
R. B. HALL, Cincinnati, Ohio.
33. Combined Abdominal and Vaginal Versus Vaginal Hysterectomy for Carcinoma. JOHN B. DEAVER, Philadelphia.
34. Operative Treatment of Cancer of Uterus.
E. E. MONTGOMERY, Philadelphia.
35. Operation for Cancer of Rectum in Female.
JOHN B. MURPHY, Chicago.
36. Cancer of Uterus. W. H. HUMISTON, Cleveland, Ohio.
37. Treatment of Cancer of Uterus.
WM. R. PRYOR, New York City.

THURSDAY, JUNE 8—AFTERNOON SESSION.

2 o'clock.

38. Nephrorrhaphy: A Study of the Remote Results, With Remarks on the Technique.
CHARLES P. NOBLE, Philadelphia.
39. Resection of Ureter. HOWARD A. KELLY, Baltimore, Md.
40. Exclusion of Intestinal Areas From Fecal Tract.
JOHN B. MURPHY, Chicago.

SYMPOSIUM ON INFLAMMATORY DISEASES OF FEMALE GENITALIA.

3 o'clock.

41. Senile Endometritis. L. H. DUNNING, Indianapolis, Ind.
42. Inflammation of Fallopian Tube, with Special Reference to Specific Origin. J. R. GUTHRIE, Dubuque, Iowa.
43. Appendicitis Operations in Young Women and Girls.
JOSEPH PRICE, Philadelphia.
44. Tubercular Peritonitis. A. H. CORDIER, Kansas City, Mo.
45. Source of Infection in Pelvic Suppuration as an Indication for Treatment. H. D. NILES, Salt Lake City, Utah.
46. Ovarian Dermoid and Large Hematocele, with Twisted Pedicle Which Caused Alarming Conditions Resembling Appendicitis; Patient Ten Years of Age; Operation; Recovery. MILO B. WARD, Kansas City, Mo.
47. Pathology of Pelvic Suppurations.
F. HENROTIN, Chicago.
48. Plea for More Frequent Avoidance of Exsection of Ovary in Connection with Resections of Diseased Tubes.
PHILANDER A. HARRIS, Paterson, N. J.
49. Residual Symptoms of Gonorrhea in Female.
EDWARD J. ILL, Newark, N. J.

FRIDAY, JUNE 8—MORNING SESSION.

9 o'clock.

50. After-Treatment of Laparotomy.
WALTER B. CHASE, Brooklyn, N. Y.
51. Ovulation and Menstruation Not Interdependent Functions. C. C. THAYER, Clifton Springs, N. Y.
52. Contribution to Study of Dysmenorrhea.
GEO. TUCKER HARRISON, New York City.
53. The Sins of Omission and Sins of Commission.
G. H. BALLERHAY, Paterson, N. J.
54. Confinement Following a Supposed Double Ovariotomy, Complicated with Intestinal Hernia Through the Old Laparotomy Wound. HENRI LEONARD, Detroit, Mich.
55. Surgery of Uterus and Other Pelvic Structures, Per Vaginam. W. H. WATHEN, Louisville, Ky.
56. Treatment of Menorrhalgia (Dysmenorrhea) of Pelvic Origin, by Electricity.
G. BETTON MASSEY, Philadelphia.

SECTION ON SURGERY AND ANATOMY.

1. Suggestions in Plastic Surgery of the Face.
J. B. ROBERTS. Philadelphia.
2. Two Cases of Growths in Frontal Sinus.
W. D. HAMILTON, Columbus, Ohio.
3. Injuries of the Skull and Its Contents.
W. H. EARLES, Milwaukee, Wis.
4. Traumatic Spine: Contribution to Mechanical Treatment of the Same, with Report of Cases.
GEO. R. ELLIOTT, New York City.
5. Laminectomy for Diseases and Injuries of the Cord.
SAMUEL LLOYD, New York City.
Discussion opened by H. WHARTON, Philadelphia.
6. External Drainage of Superficial Lung Cavities, with Report of Two Successful Cases.
W. L. WILLS, Los Angeles, Cal.
Discussion opened by J. B. MURPHY, Chicago.
7. A Retrospect of Surgery of the Stomach.
H. O. WALKER, Detroit, Mich.
8. Non-Perforating Gastric Ulcer With and Without Hemorrhage. W. L. RODMAN, Philadelphia.
9. Anterior Transverse Gastro-Enterostomy with Splitting of the Upper Anterior One-Half of Intestinal Wound.
CHRISTIAN FENGER, Chicago.
Discussion opened by FENTON B. TURCK, Chicago.
10. Two Successful Operations: *a.* Cholelithiasis. *b.* Hepatonephroptosis: Cure by Cholecystorrhaphy.
A. F. JONAS, Omaha, Neb.
11. Diagnosis and Treatment of Cholelithiasis.
W. J. MEANS, Columbus, Ohio.
12. Removal of Mucous Membrane of Gall-Bladder, a Substitute for Cholecystotomy. W. J. MAYO, Rochester, Minn.
13. Importance of Early Operation for Biliary Calculi.
M. H. RICHARDSON, Boston, Mass.
Discussion opened by W. W. KEEN, Philadelphia.
14. Colostomy for Permanent Fecal Fistula.
J. A. WYETH, New York City.
15. Exclusion of the Intestinal Area from the Fecal Tract.
J. B. MURPHY, Chicago.
16. Original Investigations on the Anatomy and Histology of Rectum and Colon, Together with Treatment of Obstinate Constipation for Obstipation Based on These Points.
J. R. PENNINGTON, Chicago.
Discussion opened by G. R. FOWLER, Brooklyn, N. Y.
17. Gunshot Wounds of Abdomen.
W. F. WESTMORELAND, Atlanta, Ga.
18. Gastric and Intestinal Wounds.
D. W. COWLEY, Oakland, Cal.
19. Lesions of Abdominal Viscera Without Injury to the Skin.
GEO. T. VAUGHAN, Washington, D. C.
20. Repair After Resection of Intestine.
W. A. EVANS, Chicago.
Discussion opened by F. H. WIGGIN, New York City.
21. Appendicitis: Colitis as an Etiologic Factor, and the Operation of Removing the Appendix in All Cases Operated on. MILES S. PORTER, Ft. Wayne, Ind.
22. Comments on Appendicitis as Commonly Practiced.
JOSEPH PRICE, Philadelphia.

23. Appendiceal Fistula. J. B. DEAVER, Philadelphia.
Discussion opened by ROBT. T. MORRIS, New York City.
24. Treatment of Ventral Hernia in Children
A. J. OCHSNER, Chicago.
25. Treatment of Ventral Hernia.
M. M. JOHNSON, Hartford, Conn.
26. Remarks on Injection Method of Treating Hernia, with Comments. G. G. COTTON, Rock Rapids, Iowa.
27. Cure of Inguinal Hernia in Men. H. O. MARCY, Boston.
Discussion opened by W. B. DE GARMO, New York City.
28. Diagnosis of Calculus Disease of Kidney, Ureters and Bladder by Roentgen Method.
C. L. LEONARD, Philadelphia.
29. Movable Kidney. M. L. HARRIS, Chicago.
30. Treatment of Injuries of the Ureter.
B. B. DAVIS, Omaha, Neb.
31. Vesicorectal Anastomosis for Exstrophy of Bladder, with Report of Case. A. E. HALSTEAD, Chicago.
32. Exstrophy of Bladder, with Exhibition of Case.
AP MORGAN VANCE, Louisville, Ky.
Discussion opened by EDWARD MARTIN, Philadelphia.
33. Tuberculosis of Prostate and Vesiculæ Seminales.
A. I. BOUFFLEUR, Chicago.
34. Contribution to Surgical Asepsis of Urethra and Bladder.
FERD C. VALENTINE, New York City.
35. Treatment of Prostatic Hypertrophy.
PARKER SYMS, New York City.
36. Indications of Urethrotomy.
G. FRANK LYDSTON, Chicago.
Discussion opened by C. C. THAYER, Clifton Springs, N.Y.
37. Use of Decalfied Bone Chips in Diseases of the Bones.
J. G. CARPENTER, Stanford, Ky.
38. Bone Tuberculosis. DEFORREST WILLARD, Philadelphia.
39. Treatment of Tubercular Knee-Joint.
WISNER TOWNSEND, New York City.
40. Operative Treatment of Disease of Shafts of Long Bones.
S. L. MCCURDY, Pittsburg, Pa.
Discussion opened by NICHOLAS SENN, Chicago.
41. Fractures of Patella. J. M. BARTON, Philadelphia.
42. Restitution of Continuity of Shaft in Tibia, by Transplantation of Patella Between the Fragments.
N. SENN, Chicago.
43. Operative Treatment for Reduced and Irreducible Dislocations. ARTHUR DEAN BEVAN, Chicago.
44. Ambulatory Treatment of Fracture, with Demonstration of a New Apparatus for Cases of Fracture Below the Knee.
E. H. LEE, Chicago.
Discussion opened by by C. A. POWERS, Denver, Colo.
45. Surgical Errors of Skiagraphy.
CARL BECK, New York City.
46. Report of Five Cases of Tetanus, Treated with Antitetanic Serum. J. D. BLAKE, Baltimore, Md.
47. Old Age Influencing Surgical Operations.
J. P. TUTTLE, New York City.
48. Report of Case of Specific Myositis, Simulating Retroperitoneal Sarcoma. ERNEST LAPLACE, Philadelphia.
49. Sarcoma of Colon, with Report of Case.
C. VAN ZWALENBERG, Riverside, Cal.
50. Coccygeal Dermoids.
J. R. EASTMAN, Indianapolis, Ind.

SECTION ON STATE MEDICINE.

1. The Stamping Out of Typhoid Fever.
SAMUEL KNOX CRAWFORD, Chicago.
JAMES MARTIN, Fredricksburg, Ohio.
2. Prevention of Tuberculosis by the State.
BENJAMIN LEE, Philadelphia.
Discussion by J. N. HURTY, Indianapolis, Ind., and HENRY MITCHELL, Trenton, N. J.
3. Experiences with Recent Epidemic of Rabies in Buffalo.
ERNEST WENDE, Buffalo, N. Y.
4. Municipal Regulation of the Spitting Habit.
E. B. BORLAND, Pittsburg, Pa.
5. Pollution of Streams and Purification of Public Water-Supplies. GEORGE M. KOBER, Washington, D.C.
6. Present State of Interstate Reciprocity Concerning Licenses to Practice Medicine. E. AMBERG, Detroit, Mich.
7. Venereal Disease as a Social Problem.
W. C. GATES, Rockland, Mich.
8. Pure Food Legislation.
MURRAY G. MOTTER, Washington, D. C.

SECTION ON OPHTHALMOLOGY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman.
H. V. WÜRDEMANN, Milwaukee, Wis.
2. Treatment of Conical Cornea: Optical Therapeutics.
SWAN M. BURNETT, Washington, D. C.
3. Operations. ROBERT SATTLER, Cincinnati, Ohio.
Discussion opened by HERMAN KNAPP, New York City, and SAMUEL D. RISLEY, Philadelphia.
4. Keratitis Bullosa, with Report of Case.
E. O. SISSON, Keokuk, Iowa.
Discussion opened by CASEY A. WOOD, Chicago.
5. Observations on Etiology of Scrofulous or Phlyctenular Keratitis and Its Treatment by Salicylate of Sodium.
H. GRADLE, Chicago.
6. Use of Protargol in Pyogenic Affections of the Cornea.
F. C. HOTZ, Chicago.
Discussion opened by L. WEBSTER FOX, Philadelphia.

WEDNESDAY, JUNE 6—MORNING SESSION.

EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.

7. A Double Trial Lens to Balance the Eyes in Presbyopia.
MARK D. STEVENSON, Akron, Ohio.
Discussion opened by JAMES THORINGTON, Philadelphia.
8. Relative Value of Instruments Used for Keratometry, with Demonstrations of Different Ophthalmometers.
A. D. MCCONACHIE, Baltimore, Md.
Discussion opened by A. EDWARD DAVIS, New York City.
9. Astigmatism, Its Detection and Correction.
H. BERT ELLIS, Los Angeles, Cal.
10. Remarks on the Value of Homatropin as a Cycloplegic—A Clinical Study. E. C. ELLETT, Memphis, Tenn.
11. A Comparison of the Cycloplegic Action of Atropin and Scopolamin. W. K. ROGERS, Columbus, Ohio.
12. How to Construct Curves Representing Relative Accommodation and Convergence. LUCIEN HOWE, Buffalo, N. Y.
Discussion opened by Edward Jackson, Denver, Colo.

WEDNESDAY JUNE 6—AFTERNOON SESSION.

RELATION OF OCULAR DISEASES AND VISUAL DEFECTS TO VOCATIONS.

13. Estimation of Amount of Injury to the Business Capacity of the Individual from Partial or Complete Loss of Vision. H. T. HANSELL, Philadelphia.
14. What Amount of Visual Defect Should Disqualify in Railroad and Steamship Service? FRANK ALLPORT, Chicago.
Discussion opened by C. H. WILLIAMS, Boston; ROBERT SATTLER, Cincinnati, Ohio.
15. Amount of Myopia Corrected by Removal of the Crystalline Lens. EDWARD JACKSON, Denver, Colo.
Discussion opened by JOHN E. WEEKS, New York City.
16. Lessons Learned from a First Series of 100 Cataract Extractions. F. T. ROGERS, Providence, R. I.
Discussion opened by E. E. HOLT, Portland, Me.
17. Secondary Operations on Capsular Membranes.
PETER A. CALLAN, New York City.
Discussion opened by H. KNAPP, New York City.
18. Systematic Cleansing of Nasal Cavities Before Operations Which Involve Opening of the Eyeball.
J. A. LIPPINCOTT, Pittsburg, Pa.
Discussion opened by H. GRADLE, Chicago.
19. Case of Coloboma of Each Lens Without Coloboma of Iris or Choroid. JAMES MOORES BALL, St. Louis, Mo.
Discussion opened by A. D. MCCONACHIE, Baltimore, Md.

THURSDAY, JUNE 7—MORNING SESSION.

EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.

20. An Improved Lantern for Testing Color Perception.
C. H. WILLIAMS, Boston, Mass.
21. A Double Hook for Use in Advancement Operations.
C. F. CLARKE, Columbus, Ohio.

22. Demonstration of a Tubercular Tumor of the Orbit.
H. F. HANSELL Philadelphia.
Discussion opened by JNO. E. WEEKS, New York City.
23. Demonstration of Sections of an Unusual Intraocular Growth. WILBER P. MARPLE, New York City.
24. The Douche in the Treatment of Purulent Conjunctivitis.
E. E. HOLT, Portland, Me.
25. An Insurance Case in Which Ossification of the Choroid Led to Identification of the Body.
ROBERT L. RANDOLPH, Baltimore, Md.
Discussion opened by A. R. BAKER, Cleveland, Ohio.

THURSDAY, JUNE 7—AFTERNOON SESSION.

RATIONAL USE AND LIMITATIONS OF THERAPEUTIC MEASURES INTENDED TO PROMOTE ABSORPTION OF EXUDATES WITHIN THE EYEBALL.

26. Medicinal Measures.
RANDOLPH BRUNSON, Hot Springs, Ark.
27. Local Therapeutics.
M. URIBE TRONCOSO, Mexico City, Mex.
28. Present Status and Value of Massage of the Eyeball, with the Consideration What Diseases of the Eye May Be Favorably Influenced by This Therapeutic Measure, and What Are the Best Means of Its Application.
CASEY A. WOOD, Chicago.
29. Use and Abuse of Iodid of Potash in Ophthalmic Practice.
A. R. BAKER, Cleveland, Ohio.
Discussion opened by GEO. M. GOULD, Philadelphia; S. C. RITCHIE, Washington, D. C.; J. SANTOS FERNANDEZ, Havana, Cuba; J. A. PRATT, Aurora, Ill.
30. Use of Heat as a Therapeutic Agent in Chronic Eye Affections. L. J. LAUTENBACH, Philadelphia.
Discussion opened by LEARTUS CONNOR, Detroit, Mich.

FRIDAY, JUNE 8—MORNING SESSION.

EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.

31. A Recording Electric Perimeter.
WM. M. SWEET, Philadelphia.
Discussion opened by H. O. REIK, Baltimore, Md.
32. Treatment of Immature Cataract with Special Reference to Rate of Development and Such Measures as May Check it. G. E. DE SCHWEINITZ, Philadelphia.
Discussion opened by JOHN E. WEEKS, New York City; ABNER W. CALHOUN, Atlanta, Ga.; and SAMUEL D. RISLEY, Philadelphia.
33. Report of Cases: *a.* Injury of the Eye, Iridocyclitis, Enucleation, Death from Meningitis. *b.* Case of Exophthalmus Due to Septic Thrombosis (?) Evisceration of Orbital Contents—Cure.
EDW. J. BERNSTEIN, Baltimore, Md.
34. Paresis of External Recti Associated with Irregular Tabes.
G. ORAM RING, Philadelphia.
Discussion opened by SAMUEL D. RISLEY, Philadelphia.
35. Glioma of Retina. G. A. SULZER, Portsmouth, Ohio.
Discussion opened by G. E. DE SCHWEINITZ, Philadelphia.
36. Hemorrhagic Glaucoma. W. C. POSEY, Philadelphia.
Discussion opened by CHAS. A. OLIVER, Philadelphia.
37. Ocular Complications of Injuries to the Head. With Report of Two Cases. J. T. CARPENTER, Philadelphia.
Discussion opened by H. T. HANSELL, Philadelphia.
38. Blindness from Drinking Jamaica Ginger: Recovery.
EDWARD STIEREN, Pittsburg Pa.
Discussion opened by R. L. RANDOLPH, Baltimore, Md.
39. Case of Extensive Laceration of External Ocular Muscles with Resultant Diplopia. Spontaneous Recovery.
40. Clinical Lessons of 200 Cases of Hyperphoria.
WENDELL REBER, Philadelphia.

SECTION ON DISEASES OF CHILDREN.

TUESDAY, JUNE 5—MORNING SESSION.

1. Address of Chairman. EDWIN ROSENTHAL, Philadelphia.

SESSION DEVOTED TO CONSIDERATION OF FEEBLE-MINDED AND TO NERVOUS DISEASES.

2. Etiology of Idiocy and Imbecility.
MARTIN W. BARR, Elwyn, Pa.
3. Physiologic Training of Feeble-Minded.
S. J. FORT, Ellicott City, Md.
4. Care of Higher Grades of the Feeble-Minded.
A. W. WILMARTH, Chippewa Falls, Wis.
5. A Study of the Circulation in the Feeble-Minded.
J. MADISON TAYLOR and F. SAVARY PEARCE, Philadelphia.
6. Infantile Cerebral Palsies. A. C. COTTON, Chicago.
Discussion by WM. M. LESZYNSKY, New York City; I. N. LOVE, St. Louis, Mo.; W. S. CHRISTOPHER, Chicago; JOHN S. MUSSER, DE FORREST WILLARD, and F. X. DERCUM, Philadelphia; H. N. MOYER, Chicago; LOUIS FAUGERES BISHOP, New York City; J. P. CROZER GRIFFITH, Philadelphia.

TUESDAY, JUNE 5—AFTERNOON SESSION.

SESSION DEVOTED TO CONSIDERATION OF DISEASES OF THE BLOOD AND THE CIRCULATION.

7. Antecedents of Valvular Heart Disease in Children.
FREDERICK A. PACKARD, Philadelphia.
8. Purpura Hemorrhagica or Scorbutus: A Clinical Sketch.
HENRY E. TULEY, Louisville, Ky.
9. Rheumatism. SAMUEL E. WOODY, Louisville, Ky.
10. Chorea. J. CLEMENTS, Kansas City, Mo.
11. Medicinal and Surgical Treatment of So-Called Scrofula.
G. M. BLECH, Chicago.
12. Essential Points of Difference in Treatment of Adolescent Senile Heart. JOHN A. ROBISON, Chicago.
13. Abortive Treatment of Pneumonia.
HENRY ILLOWAY, New York City.
Discussion on Pneumonia by EWD. F. WELLS, Chicago.
Discussion opened by ALFRED STENGEL, Philadelphia; S. SOLIS-COHEN, Philadelphia; EDWIN E. GRAHAM, and S. S. ADAMS, Washington, D. C.; J. J. MORRISSEY, New York City.
14. Value of Blood Examinations for Diagnostic Purposes.
J. BRANDEIS, New York City.
15. Diabetes Mellitus in Children: Report of Two Cases.
LEOPOLD F. HAAS, New York City.

WEDNESDAY, JUNE 6—MORNING SESSION.

SESSION DEVOTED TO THE CONSIDERATION OF INFANT FEEDING AND TO DISEASES OF DIGESTIVE TRACT.

16. Milk Supply and Control at the Kaiserin Friedrich Hospital.
ADOLF BAGINSKY and PAUL SOMMERFELD, Berlin.
Read by LOUIS FISCHER, New York City.
17. Infant Feeding. ALEXANDER MCALISTER, Camden, N. J.
Discussion opened by HENRY D. CHAPIN, New York City; VICTOR C. VAUGHAN, Ann Arbor, Mich.; and WILLIAM LELAND STOWELL, New York City.
19. Gastrointestinal Hemorrhage in the New-Born.
EDWARD H. SMALL, Pittsburg, Pa.
18. Infant Feeding; Accidents and Incidents.
WM. P. NORTHRUP, New York City.
20. Causation and Relative Frequency of Typhlitis, Perityphlitis and Appendicitis in Infancy and Childhood.
JOSEPH N. BYRNE, New York City.
21. Differential Diagnosis Between Abdominal Typhoid and Appendicitis, by Means of Iodin Reaction: Report of Case. S. WEISS, Vienna.
22. Congenital Malformation of Rectum. A Case of Maternal Impression. THOMAS CHARLES MARTIN, Cleveland, Ohio.
23. Athrepsia Infantum; Diagnosis and Treatment.
LOUIS FISCHER, New York City.
24. New Home Milk Modifier: Demonstration.
25. Clinical Significance of Stools in Diarrhea of Infants.
WILLIAM E. DARNALL, Atlantic City, N. J.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

SESSION DEVOTED TO CONSIDERATION OF CONTAGIOUS DISEASE.

26. Shall Children be Kept from Measles and Exanthemata Usually Incident to Children?
C. F. WAHRER, Fort Madison, Iowa.
27. Rötheln, A Distinct Affection Apart from Measles and Scarlatina, and Its Differentiation from These Exanthemata. HENRY KOPLIK, New York City.
28. Clinical and Pathologic Study of Rash of Scarlet Fever, with Especial Reference to Origin and Character of Desquamation. JAY F. SCHAMBERG, Philadelphia.

29. Differential Diagnosis of Influenza with Eruptions, and Infectious Diseases of Childhood.
A. S. DANIEL, New York City.
30. Fetal and Infantile Typhoid.
JNO. LOVETT MORSE, Boston.
31. Intubation in Private Practice, and Its Perfection.
JOSEPH TRUMPP, Munich.
Read by the SECRETARY.
32. Resulting Injuries Due to Extubation.
JANOS BOKAY, Budapest.
Read by ALEXANDER KLEIN, Philadelphia.
33. Treatment of Ear Complications in Measles, Diphtheria and Scarlet Fever. CHARLES W. HOOPES, Philadelphia.
Discussion by WM. M. WELCH, W. C. HOLLOPETER, S. SOLIS-COHEN, Philadelphia; LOUIS FISCHER, WM. P. NORTHRUP and DILLON BROWN, New York City.

THURSDAY, JUNE 7—AFTERNOON SESSION.

SESSION DEVOTED TO CONSIDERATION OF SCHOOL CHILDREN.

34. Symmetrical Development; or, Does Our Present School System Develop the Highest Powers of the Child?
E. STUVER, Fort Collins, Colo.
35. School Break-Downs.
J. HENRY BARTLETT, Philadelphia.
36. Eye Strain. THOMAS H. FENTON, Philadelphia.
37. Care of Ear in School Children.
LOUIS J. LAUTENBACH, Philadelphia.
38. Neglect of Teeth in Children.
A. D. ROSENTHAL, New York City.
39. Physician's Responsibility in Physical Education of School Children. GRACE E. SPIEGLE, Philadelphia.
Discussion by F. X. DERCUM, Philadelphia; C. F. WAHRER, Fort Madison, Iowa.

FRIDAY, JUNE 8—MORNING AND AFTERNOON SESSIONS.

SESSION DEVOTED TO SURGICAL SUBJECTS.

40. Movable Kidney (Floating) in Children.
ISAAC A. ABT, Chicago.
41. Symptomatology of Appendicular Inflammation in Children. THOMAS H. MANLEY, New York City.
42. Normal Salt Transfusion in New-Born for Hemorrhage from Cord. JOHN S. MILLER, Philadelphia.
43. Some Joint Diseases in Children; Their Diagnosis and Treatment. EDWARD A. TRACY, South Boston, Mass.
44. Diseases of Antrum of Highmore in Young Children, with Report of Case. EMIL MAYER, New York City.
45. Surgical Circumcision: Its Technique; Prevention of Infection; Its Legal Control; Should be Performed by None but Physicians.
FERD. C. VALENTINE, New York City.

SECTION ON STOMATOLOGY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

Address of Chairman. EUGENE S. TALBOT.

SYMPOSIUM ON DENTAL EDUCATION.

1. Relations of Dental and Oral Surgery to General Medicine: Professional Status of Properly Educated Practitioners of Dental and Oral Surgery.
N. S. DAVIS, SR., Chicago.
2. Preliminary Qualifications. J. TAFT, Cincinnati, Ohio.
3. Course of Study. W. A. EVANS, Chicago.
4. Methods of Teaching—Didactic or Recitational.
A. H. PECK, Chicago.

WEDNESDAY, JUNE 6—MORNING SESSION.

5. Shall the Dental Student be Educated Independently of General Medicine? G. V. I. BROWN, Milwaukee, Wis.
6. Is Medical Education a Necessary Qualification for Dental Practice? ALICE STEEVES, Chicago.
7. Is Medical Education a Necessary Qualification for Dental Practice? R. R. ANDREWS, Cambridge, Mass.
8. Practical Value of a Medical Education in Dental Practice. W. B. HILL, Milwaukee, Wis.
9. Technical Training versus Theoretic.
JOHN S. MARSHALL, Chicago.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

10. Should the Medical Undergraduate be Instructed in the Principles of Dentistry? M. L. RHEIN, New York City.
11. Post-Graduate Study in Dentistry and Degrees Therefor.
W. E. WALKER, Pass Christian, Miss.
12. The Handwriting on the Wall: What does it Portray?
A. E. BALDWIN, Chicago.
13. Limitations. EUGENE S. TALBOT, Chicago.

THURSDAY, JUNE 7—MORNING SESSION.

SYMPOSIUM ON INTERSTITIAL GINGIVITIS OR SO-CALLED PYORRHEA ALVEOLARIS.

14. Etiology. G. LENOX CURTIS, New York City.
15. Neurotic Affections. J. G. KIERNAN, Chicago.
16. Indigestion Autointoxication. EUGENE S. TALBOT, Chicago.
17. Chemical Factors in Etiology. W. L. BAUM, Chicago.
18. Constitutional Treatment. J. H. SALISBURY, Chicago.

THURSDAY, JUNE 7—AFTERNOON SESSION.

19. Local Treatment. M. H. FLETCHER, Cincinnati, Ohio.
20. So-Called Glands in the Peridental Membrane.
M. H. FLETCHER, Cincinnati, Ohio.
21. Evolution of Decay Continued.
ARCH C. HART, San Francisco, Cal.
22. Co-operation of Public Schools in Teaching. Good Teeth, Good Health. Whatever We Wish to See Introduced Into the Life of a Nation Must First Be Introduced Into Its Schools. RICHARD GRADY, Baltimore, Md.
23. Oral Surgical Operations. G. V. I. BROWN, Milwaukee, Wis.

SECTION ON NEUROLOGY AND MEDICAL JURISPRUDENCE.

The Hotel Brighton will be headquarters of this Section, and the meetings will be held there. There will be no morning sessions unless necessary for completion of the program.

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman. HUGH T. PATRICK, Chicago.
2. Report of Eight Operations for Brain Tumors and Cysts.
HERM. H. HOPPE, Cincinnati, Ohio.
3. Diagnosis of Apoplexy Without Motor Paralysis.
WILLIAM N. BULLARD, Boston.
4. A Case Resembling one of Raynaud's Disease, With Microscopic Examination. WILLIAM G. SPILLER, Philadelphia.
5. Legal Responsibility of Degenerates not Insane.
DAVID INGLIS, Detroit, Mich.
6. Therapeutics of Travel and Change of Scene in Nervous and Mental Diseases. RICHARD DEWEY, Chicago.
7. Post-febrile Insanity and Its Treatment.
FRANK P. NORBURY, Jacksonville, Ill.
8. Cranial Injuries and Insanity, with Report of Case.
EUGENE G. CARPENTER, Columbus, Ohio.
9. Medicolegal Relations of Opium Inebriety.
T. D. CROTHERS, Hartford, Conn.
10. Morphinism from the Standpoint of the General Practitioner. T. J. HAPPEL, Trenton, Tenn.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

11. The Nervous Diseases Caused by Trauma.
CHAS. W. BURR, Philadelphia.
12. Nature and Symptomatology of Traumatic Neuroses.
HAROLD N. MOYER, Chicago.
13. Traumatic Neuroses from the Standpoint of a Railway Surgeon. ARTHUR DEAN BEVAN, Chicago.
14. Medicolegal Relations of Traumatic Nervous Affections.
JAMES HENDRIE LLOYD, Philadelphia.
15. An Analysis of Cases of Traumatic Neuroses with Special Reference to Prognosis.
JAMES JACKSON PUTNAM, Boston.
16. Prognosis and Treatment of Traumatic Neuroses.
WHARTON SINKLER, Philadelphia.
Discussion opened by DANIEL R. BROWER, HERM. H. HOPPE, and FRANCIS X. DERCUM.
17. Treatment of Neurasthenia.
DANIEL R. BROWER, Chicago.
18. Some Methods of Treating Neuralgia.
W. J. HERDMAN, Ann Arbor, Mich.
19. Modern Treatment of Locomotor Ataxia.
CURRAN POPE, Louisville, Ky.
20. Subject Unannounced.
FRANCIS X. DERCUM, Philadelphia.

THURSDAY, JUNE 7—AFTERNOON SESSION.

2 o'clock.

21. Diagnosis of Hysteria from Organic Disease of the Brain. CHAS. K. MILLS, Philadelphia.
22. Diagnosis of Hysteria from Organic Disease of the Spinal Cord and Peripheral Nerves. FREDERICK PETERSON, New York City.
23. General Treatment of Hysteria. B. SACHS, New York City.
24. Technique of the "Rest Cure," with Indications and Contraindications for its Use. JOHN K. MITCHELL, Philadelphia.
Discussion to be opened by C. W. BURR, JOHN PUNTON, WILLIAM G. SPILLER and W. J. HERDMAN.
25. Differentiation of Chorea and Disorders Simulating It. A. A. ESHNER, Philadelphia.
26. Prophylaxis of Chorea. J. MADISON TAYLOR, Philadelphia.
27. On a Certain Routine Treatment for Gouty Conditions. FRANK R. FRY, St. Louis, Mo.
28. Combined Sclerosis of the Lichtheim-Putnam-Dana Type Accompanying Pernicious Anemia. F. W. LANGDON, M. A. BROWN AND D. I. WOLFSTEIN, Cincinnati, Ohio.
29. Aphasia: Report of Case. GUY HINSDALE, Philadelphia.

FRIDAY, JUNE 8—AFTERNOON SESSION.

2 o'clock.

30. Subject Unannounced. J. HENDRIE LLOYD, Philadelphia.
31. Migraine, with the Consideration of Heredity. D. J. MCCARTHY, Philadelphia.
32. Case of Gastric Vertigo Closely Simulating Meinère's Disease. G. W. MCCASKEY, Fort Wayne, Ind.
33. Evolutional and Involutional Types of Nervous Disease. ED. E. MAYER, Pittsburg, Pa.
34. Effect of Alcohol on the Nervous System. ALBERT E. STERNE, Indianapolis, Ind.
35. Case of Transient Motor Aphasia, Complete Anomia, Nearly Complete Aphasia and Slight Word-Blindness, Occurring in a Left-Handed Man, and Due to a Probable Lesion of the Third Frontal Convolution of the Right Side. CHAS. S. POTTS, Philadelphia.
36. Hereditary Color-Blindness. F. SAVARY PEARCE, Philadelphia.
37. Pathophobia as an Element of Nervous Diseases and its Treatment. JOHN PUNTON, Kansas City, Mo.
38. Post-Anesthetic Paralysis. C. C. HERSMAN, Pittsburg, Pa.
39. The Insanities. WILLIAM FRANCIS DREWRY, Petersburg, Va.
40. The Simplest Explanation of the Functions of the Nervous System. G. W. DRAKE, Hollins, Va.
41. Drug Habits. A. J. PRESSEY, Cleveland, Ohio.
42. A Study of Cerebral Syphilis, with Report of Case. JAS. H. MCBRIDE, Pasadena, Cal.
43. Case of Gastric Vertigo Closely Simulating Menière's Disease. G. W. MCCASKEY, Fort Wayne, Ind.

SECTION ON CUTANEOUS MEDICINE AND SURGERY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

3 o'clock.

1. Address of Chairman: "Recent Advances in Dermatology Which are of Service to the General Practitioner." L. DUNCAN BULKLEY, New York City.
2. Treatment of Skin Cancers. LOUIS A. DUHRING, Philadelphia.
3. An Additional Note on Herpes Gangrenosus. A. W. BRAYTON, Indianapolis, Ind.
4. A Peculiar Progressive Pigmentary Disease of the Skin. JAY F. SCHAMBERG, Philadelphia.
5. Report of Four Cases of Lupus Vulgaris Treated with X-Rays. WILLIAM B. EWING, Pittsburg, Pa.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

6. Leucopathia Ungium; Some Etiologic and Pathologic Considerations. M. L. HEIDINGSFELD, Cincinnati, Ohio.
7. Syphilis as a Nonvenereal Disease. L. DUNCAN BULKLEY, New York City.
8. Successful Treatment of Skin Cancers Without Operation. HENRY W. STELWAGON, Philadelphia.
9. Xeroderma Pigmentosum (With Lantern Slide Illustrations). A. RAVOGLI, Cincinnati, Ohio.
10. Syphilitic Gumma of Larynx. EDWARD T. DICKERMAN, Chicago.

THURSDAY, JUNE 7—AFTERNOON SESSION.

11. Acute Suppurative Folliculitis of Scalp. WILLIAM S. GOTTHEIL, New York City.
12. Diagnosis and Treatment of Pruritus Essentialis. FRED J. LEVISEUR, New York City.
13. Clinical Study of Pityriasis Versicolor and Pityriasis Rosæ. CHARLES W. ALLEN, New York City.
14. Pemphigus of Mucous Membrane of Mouth. WILLIAM L. BAUM, Chicago.
15. Some of the Rarer Skin Manifestations of Syphilis. J. A. FORDYCE, New York City.
16. Treatment of Syphilis: General Discussion.

SECTION ON LARYNGOLOGY AND OTOLOGY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

2 o'clock.

1. Address of Chairman. CHRISTIAN R. HOLMES, Cincinnati, Ohio.
2. Address on Laryngology and Its Relation to General Medicine. (By Invitation.) J. SOLIS-COHEN, Philadelphia.
3. Import of Bacteria As Found in the Ear, Nose and Throat. D. BRADEN KYLE, Philadelphia.
4. Comminution of Thyroid Cartilages Due to a Bullet Whose Point of Entrance Was in the Frontal Bone. EMIL MAYER, New York City.
5. Papilloma of Larynx. E. T. DICKERMAN, Chicago.
6. Unusual Papillomatous Growth in Larynx. JAS. S. GIBBS, Philadelphia.
7. Angina Epiglottida Anterior. C. F. THEISEN, Albany, N. Y.
8. Care and Use of Instruments. A. DEVILBISS, Toledo, Ohio.
9. Embryonic Defects of Nose, Throat and Ear and Their Causes, with Lantern Exhibition. GEO. C. STOUT, Philadelphia.

WEDNESDAY, JUNE 6—MORNING SESSION.

9 o'clock.

10. The Atrophic Pharynx. R. W. SEISS, Philadelphia.
11. Present Status of Antitoxin Treatment. S. J. ALLEN, Cincinnati, Ohio.
12. Some Experiments on Relation Between Audition and Circulation of Blood. H. STILLSON, Seattle, Wash.
13. Some Points in Diagnosis of Syphilis of Upper Air-Passages. GEO. L. RICHARDS, Fall River, Mass.
14. Remarks on Internal and External Operations for Chronic Frontal Sinusitis. R. C. MYLES, New York City.
15. Hysterical Deafness, with Report of Cases. A. E. BULSON, JR., Fort Wayne, Ind.
16. Ear Diseases in Childhood and Infancy. J. HOMER COULTER, Chicago.
17. Value of Enzymol in Treatment of Acute and Chronic Purulent Affections of Mastoid, Tympanic and Accessory Cavities, Based on Bacteriologic Study of Fifty Cases. TALBOT R. CHAMBERS, Jersey City, N. J.
18. Notes on Two Cases of Voluntary Laryngeal Whistling. G. HUDSON MAKUEN, Philadelphia.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

2 o'clock.

SYMPOSIUM ON INFLAMMATION OF MASTOID.

19. Tympanomastoiditis in Children. (By Invitation.) HERMAN KNAPP, New York City.
20. Complications of Mastoid Abscess. C. W. RICHARDSON, Washington, D. C.

21. Some Observations in Mastoid Operations.
A. W. CALHOUN, Atlanta, Ga.
22. Primary Tuberculosis of the Mastoid.
M. A. GOLDSTEIN, St. Louis, Mo.
23. Report of Three Cases of Ligation of Internal Jugular for Septic Thrombosis, Following Purulent Otitis Media: Recovery. E. B. DENCH, New York City.
24. Suppurating Mastoiditis, with Report of Cases.
J. H. BRYAN, Washington, D. C.
General discussion on the Symposium, opened by FRED WHITING, New York City.
25. Limitation of Ossiculectomy and Tympanic Curettement.
FRANK ALLPORT, Chicago.
26. Bony Defects and Fistulæ in the Meatus in the Ear.
H. GRADLE, Chicago.
27. Accessory Sinus Affections.
E. L. VANSANT, Philadelphia.
28. Enlarged Lingual Tonsil: Report of Case.
FRANK D. BOYD, Fort Worth, Texas.

THURSDAY, JUNE 7—MORNING SESSION.
9 o'clock.

29. Sarcoma of Nasal Passages: Report of Cases.
DUNBAR ROY, Atlanta, Ga.
30. Untoward Sequence of Adenoid Operations.
E. L. SHURLY, Detroit, Mich.
31. Various Forms of Nasal Hemorrhage.
W. SCHEPPEGREL, New Orleans, La.
32. General Bodily Resistance as a Factor in History and Cure of Nose and Throat Diseases.
F. L. STILLMAN, Columbus, Ohio.
33. Limitation of Laryngologist in General Treatment of Nose and Throat Diseases. H. W. LOEB, St. Louis, Mo.
34. Treatment of Atrophic Rhinitis by Electrolysis and Some Experiments to Determine Efficiency of Needles of Different Metals. CAROLUS M. COBB, Lynn, Mass.
35. Treatment of Deflection of Nasal Septum, Complicated by Traumatic Deformity of External Bony and Cartilaginous Framework of Nose.
E. B. GLEASON, Philadelphia.
36. Neuroses of Larynx. J. F. WOODWARD, Norfolk, Va.
37. Cough Due to Reflex Irritation in Upper Air-Passages.
F. H. S. MILBURY, Brooklyn, N. Y.
38. Immunizing Treatment of Hay-Fever.
HOLBROOK H. CURTIS, New York City.

THURSDAY, JUNE 7—AFTERNOON SESSION.
2 o'clock.

39. Ocular Expression of Intranasal Lesions.
ROBERT SATTLER, Cincinnati, Ohio.
40. Systemic Factors in Catarrhal Deafness.
SARGENT F. SNOW, Syracuse, N. Y.
41. Diagnosis and Prognosis of Ear Disease.
B. ALEXANDER RANDALL, Philadelphia.
42. Unusual Ocular Symptoms Following Removal of Septal Spurs. J. L. GOODALE, Boston.
43. Lithemia from Otorhinologic Point of View.
CHEVALIER JACKSON, Pittsburg, Pa.
44. Aural Manifestations of Hysteria.
NORVAL H. PIERCE, Chicago.
45. Fistula Auris Congenita. Operation and Important Complications. JOHN O. MCREYNOLDS, Dallas, Texas.
46. Laryngeal Tuberculosis at Montefiore Home, New York City. W. FRUEDENTHAL, New York City.
47. Operation for Disease of Middle Ear.
W. F. COLE, Waco, Texas.
48. Modus of Infection of Maxillary Sinus.
M. H. CRYER, Philadelphia.
49. Nasopharyngeal Growth from Non-Use of Nose.
NORBURNE B. JENKINS, Chicago.

SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

TUESDAY, JUNE 5—AFTERNOON SESSION.
2 o'clock Sharp.

1. Address of Chairman. LEON L. SOLOMON, Louisville, Ky.
2. Treatment of Acute Alcoholism by Large Doses of Digitalis. A Clinical Study Based on Cases in the Alcoholic Wards of Bellevue Hospital.
HENRY P. LOOMIS, New York City.
3. Some Dangers from the Use of Narcotics in Young Persons. T. D. CROTHERS, Hartford, Conn.
4. Plea for Greater Simplicity in Therapeutics.
L. FAUGERES BISHOP, New York City.
5. Neglect of Old Remedies.
HERSCHEL FISCHER, Lebanon, Ohio.
6. Therapeutic Progress.
J. TRACY MELVIN, Saguache, Colo.
7. Therapeutic Skepticism.
H. V. SWERINGEN, Fort Wayne, Ind.
Discussion by DRS. N. S. DAVIS, JR., Chicago; HENRY LOOMIS, New York City, and FRANK WOODBURY, Philadelphia.
8. Dietetic Treatment of Diabetes. N. S. DAVIS, JR., Chicago.
9. *a.* Coma Diabeticum and its Treatment. *b.* The Milk Régime in the Diabetic State.
HEINRICH STERN, New York City.
Discussion by DRS. F. L. SHATTUCK, Boston, Mass.; CHAS. LYMAN GREENE, St. Paul, Minn.; O. T. OSBORNE, New Haven, Conn.; N. P. BARNES, Washington, D. C.

WEDNESDAY, JUNE 6—MORNING SESSION.
9 o'clock Sharp.

10. Brief Note on Ointments and Some of Their Medical Applications. The Intraleiptic Method of Treatment.
FRANK WOODBURY, Philadelphia.
11. Present Views on Use of Unbroken Skin as an Absorbing Medium. THOMAS F. REILLY, New York City.
Discussion by DRS. J. V. SHOEMAKER, Philadelphia; GEO. F. BUTLER, Alma, Mich.; H. A. HARE, Philadelphia; G. C. OBER, Washington, D. C.
12. The Metric System.
F. G. WHEATLEY, N. Abington, Mass.
13. Treatment of Migraine.
E. W. MITCHELL, Cincinnati, Ohio.
14. Value of Potassium Bicarbonate in Practice.
STEPHEN HARNSBERGER, Catlett, Va.
15. Organic or Inorganic Preparations of Iron.
H. FINKELPEARL, Pittsburg, Pa.
16. Idiosyncrasy Against Mercury. A Case of Erythema Mercuriale. A. BERNHEIM, Philadelphia.
17. Report of Case Illustrating Value of Rectal Injections of Salt Solution in Hemorrhage.
T. B. GREENLEY, Meadow Lawn, Ky.
18. Hydriatic Treatment of Chronic Disorders.
J. H. KELLOGG, Battle Creek, Mich.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.
2 o'clock Sharp.

19. Rôle of Drugs in the Management of Consumption.
S. SOLIS-COHEN, Philadelphia.
20. Importance of Early Recognition of Tuberculosis.
A. M. HOLMES, Denver, Colo.
Discussion by DRS. WM. H. THOMPSON, New York City; J. N. UPSHUR, Richmond, Va.; HENRY P. LOOMIS, New York City.
21. Treatment of Chronic Interstitial Nephritis.
CHAS. LYMAN GREENE, St. Paul, Minn.
22. Heart Tonics. J. N. UPSHUR, Richmond, Va.
23. Treatment of Gastric and Duodenal Ulcer.
F. L. SHATTUCK, Boston, Mass.
24. Some Points in Treatment of Gastric Ulcer.
D. D. STEWART, Philadelphia.
25. Classification of Medicines Based on the Time Required to Produce Their Effects.
WM. H. THOMSON, New York City.
Discussion by DRS. H. A. HARE, Philadelphia; G. F. BUTLER, Alma, Mich.; J. V. SHOEMAKER, Philadelphia, and WM. BAILEY, Louisville, Ky.
26. Therapeutics of Vertigo.
J. LEONARD CORNING, New York City.
Discussion by DRS. J. H. MUSSER, Philadelphia; D. R. BROWER, Chicago; J. C. CULBERTSON, Cincinnati, Ohio; SAMUEL C. BUSEY, Washington, D. C.

27. Use of Adhesive Plaster in Various Internal Conditions. J. H. MUSSER, Philadelphia.

THURSDAY, JUNE 7—MORNING SESSION.

28. Therapeutics of Croupous Pneumonia. J. M. ALLEN, Liberty, Mo.
29. Therapy of Malignant Cases of Acute Infections. J. C. LANGE, Pittsburg, Pa.
30. Increasing the Value of Cod-liver Oil by the Addition of Free Iodin and Free Phosphorus. LOUIS J. LAUTENBACH, Philadelphia.
31. Action of Chlorolose as a Hypnotic. JAMES TYSON, Philadelphia.
32. Gastro-Intestinal Remedies in Typhoid Fever. J. M. ANDERS, Philadelphia.

Discussion by DRS. FRANK BILLINGS, Chicago; J. C. LANGE, Philadelphia; J. M. TYSON, Philadelphia; and F. P. MORGAN, Washington, D. C.

33. Chills from Obscure Causes. M. C. O'BRIEN, New York City.

THURSDAY, JUNE 7—AFTERNOON SESSION.

34. Irrigation of the Colon as a Therapeutic Measure. GEO. J. LOCHBOEHLER, Washington, D. C.
35. Pharmaco-Physiologic Action of Drugs as Contrasted with Their Alleged Specific Action. GEO. F. BUTLER, Alma, Mich.

Discussion by DRS. J. M. ANDERS, Philadelphia; O. T. OSBORNE, New Haven, Conn.; C. D. SPIVAK, Denver, Colo.

36. Therapeutic Application of Organic Extracts. O. T. OSBORNE, New Haven, Conn.
37. Relative Value of Various Forms of Local Treatment in Erysipelas. HOBART A. HARE, Philadelphia.
38. Psychic Therapeutics. J. C. CULBERTSON, Cincinnati, Ohio.
39. Treatment of Addison's Disease, with Case. JOHN V. SHOEMAKER, Philadelphia.
40. Lavage of Stomach as a Therapeutic Measure in Treatment of Constipation. C. D. SPIVAK, Denver, Colo.
41. Protest Against the Use of Proprietary Remedies. DANIEL R. BROWER, Chicago.
42. Symposium on New Remedies, Including Their Chemistry and Therapeutic Application. J. W. WAINWRIGHT, New York City.

FRIDAY, JUNE 8—MORNING SESSION.

43. Decadence of the Crude Drugs. LUCIUS E. SAYRE, Lawrence, Kan.
44. Pharmacologic Assay of Drugs and its Importance in Therapeutics. E. M. HOUGHTON, Detroit, Mich.
45. What Standardization Means for the Physician. A. R. L. DOHME, Baltimore, Md.
46. The United States Pharmacopeia of 1900. JOS. P. REMINGTON, Philadelphia.
47. The Pharmacopeia, The Medical Journal and the Profession. A. L. BENEDICT, Buffalo, N. Y.
48. Pharmacology and Ethics. F. E. STEWART, New York City.

Discussions by DRS. H. C. WOOD, Philadelphia; G. F. BUTLER, Alma, Mich.; H. A. HARE, Philadelphia; CHAS. RICE, New York City; J. V. SHOEMAKER, Philadelphia; O. T. OSBORNE, New Haven, Conn.; J. M. ANDERS, Philadelphia.

SECTION ON PHYSIOLOGY AND DIETETICS.

1. Address of Chairman. ELMER LEE, New York City.
2. Some Practical Points in Connection with the Physiology of Digestive Organs. A. L. BENEDICT, Buffalo, N. Y.
3. Movements of Intestines. A. BERNHEIM, Philadelphia.
4. Normal Respiration of the Still-Born. DANIEL LICHTY, Rockford, Ill.
5. Some Dietetic Fallicies. JOHN MADDEN, Milwaukee, Wis.
6. Some Observations on the Excretion of the Alloxuric Bodies. MARK MILLIKIN, Hamilton, Ohio.
7. Properties Which are Possessed by all Foods in Their Relation to Nutrition, and the Relation of Alcohol to Nutrition. WINFIELD S. HALL, Chicago.
8. Food in Health and Disease. E. BRIGGS, Wilmington, Ohio.
9. Dietetic Treatment of Typhoid Sequelæ in Children. HUGH F. LORIMER, Fair Haven, Ohio.
10. The Progression of an Entity. E. G. BERGEN, Washington, N. J.
11. Life and Its Association with Matter; Matter not Vital but Absolutely Chemical. E. C. HEBBARD, Boston.
12. Post-Operative Nervous Phenomena, or Artificial Menopause. JOSEPH PRICE, Philadelphia.
13. Is it Possible by Proper Dietetics and Hygiene to Exterminate Tuberculosis. J. E. KINNEY, Denver, Colo.
14. Modern Covering of Foot as Affecting its Physiologic Action. AUGUSTUS P. CLARKE, Cambridge, Mass.
15. Poisoning from Auto-Intoxications. T. D. CROTHERS, Hartford, Conn.
16. When Should Patients be Advised to Eat Everything. BOARDMAN REED, Philadelphia.
17. Synthesis of Cataract by Food. EPHRAIM CUTTER, New York City.
18. Physiologic Explanation of Pharmacology. ELMER F. GOULD, Carthage, Mo.
19. Solids of Skimmed Milk as a Food Product. WILLIAM A. HALL, New York City.
20. Physiologic Care of Colds. CHARLES H. SHEPARD, Brooklyn, N. Y.
21. Contribution to Methods of Physiologic Training. ELMER GATES, Chevy Chase, Md.
22. Bone Food. B. T. WHITMORE, New York City.
23. Alcohol; Is it a Food or Drug? A. T. CUZNER, Gilmore, Fla.
24. Poem. DR. CRAWFORD.

PROVISIONAL SECTION ON PATHOLOGY.

Program Prepared by Unofficial Committee on Pathologic Section. L. Hektoen, Chairman.

1. Hemorrhagic Infection in an Infant, due to the Typhoid Bacillus. GEORGE BLUMER, Albany, N. Y.
2. Effect of Direct, Alternating and Tesla Currents on Bacteria. F. ROBERT ZEIT, Chicago.
3. Pathologic Alterations of Mucous Membranes of Upper Respiratory Tract Following La Grippe. D. BRADEN KYLE, Philadelphia.
4. Bacterial Toxins.

VICTOR C. VAUGHAN and THOMAS B. COOLEY, Ann Arbor, Mich.

5. Morphologic Variations in Pathogenic Bacteria, with Two Pronounced Examples. A. P. OHLMACHER, Gallipolis, Ohio.
6. Morbid Anatomic and Bacteriologic Features of Case of Acute Gangrenous Cholecystitis. W. G. LIST, Gallipolis, Ohio.
7. Advantages of a Museum in the Education of Medical Students. D. HUNTER MCALPIN, New York City.
8. Classification for Pathologic Museums. H. C. GILLAM and L. HEKTOEN, Chicago.
9. Animal Pathology in Relation to Public Health. D. E. SALMON, Washington, D. C.
10. Tenia Flavopunctata, with Exhibition of Complete Specimen. FREDERICK A. PACKARD, Philadelphia.
11. Pathologic Formation of Corpus Luteum Tissue. LEO LOEB, Chicago.
12. Report of Case of Mixed Tumor of Kidney (Adeno-cysto-myxo-angio-rhabdo-myo-sarcoma). W. T. HOWARD, JR., Cleveland, Ohio.
13. Report of Case of Angiosarcoma of Right Cerebral Hemisphere. ROGERS G. PERKINS, Cleveland, Ohio.
14. Tumors of Intercarotid Gland. W. L. BIERRING, Iowa City, Iowa.
15. Demonstration of Gross Lesions of Nervous System. W. G. SPILLER, Philadelphia.
16. Histopathology of Tubal Pregnancy. MAXMILIAN HERZOG, Chicago.
17. Demonstration of Photographs Illustrating Mental Diseases. J. W. BLACKBURN, Washington, D. C.